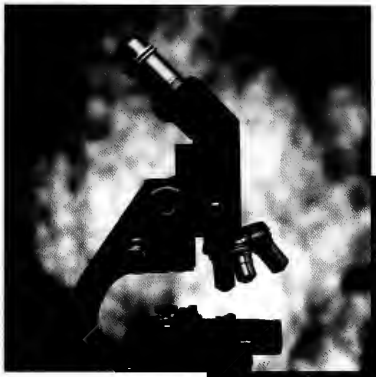
Ivy Tech State College

1998-2000 College Catalog



Go further faster

IVY TECH STATE COLLEGE

Notice

This catalog is intended to supply accurate information to the reader. From time to time, certain information may be changed.

The College may revise any matter described in this catalog at any time without publishing a revised version of the catalog. Courses, programs, curricula, and program requirements may be changed or discontinued at any time. Information that appears to apply to a particular student should be verified with the Office of Student Affairs at your local campus. Local campus information is found on page 6. This publication and its provisions are not in any way a contract between the student and Ivy Tech State College.

Ivy Tech is an accredited, equal opportunity, affirmative action state college.

A copy of the most recent annual financial statement can be obtained upon request from the Office of the Treasurer.

Message from the President

The faculty and staff join me in welcoming you to Ivy Tech State College. The decision to continue your education is a commitment to embark on a journey of life-long learning. I am pleased that you are beginning this journey with us.

Today's job market is highly competitive. Only those with a solid educational background and finely honed skills will succeed. At Ivy Tech, we prepare you to compete in that environment.

You have chosen a college known for instructional excellence. Our programs are challenging and keep pace with evolving technology. Our faculty and staff care about your success as a student.

Whether you plan to transfer to a four-year institution, obtain employment, add to your training, or update your skills, Ivy Tech gives you the knowledge and the tools to meet the challenges of the future.

I wish you every success on your journey of learning.

Sincerely,

Gerald I. Lamkin

Gerald I. Lamkin

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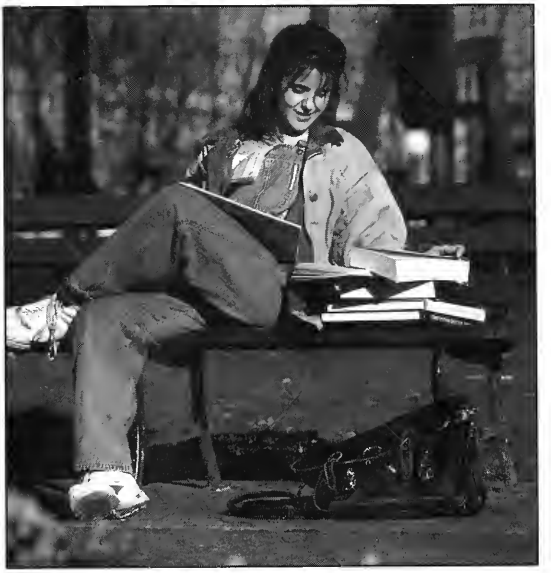

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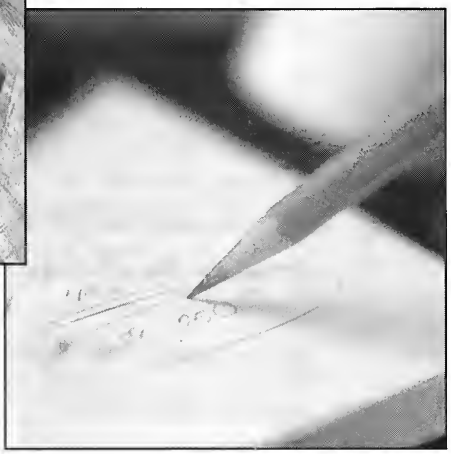


General Information

How to Use this Catalog

This catalog is easy to use.

Just take a minute to flip through it. You'll see right away that it isn't too hard to find what you're looking for. When in doubt, use the **table of contents** in the front or the **index** in the back.

It has Five Sections.

General Information and College Services

This section has basic information about the College and its campuses. It includes College history, campus addresses, and other important information such as financial aid, student rights, grading systems, and so on. Get to know this section well.

Degree Programs and Requirements

Use this section to find out which classes to take to earn the degree or certificate you want. It's organized by "division" (such as business or technology), then by "program" (such as business administration or industrial technology), and finally by "specialty" (such as marketing or machine tool). You also use this section to find out what degrees are offered in a certain field and how many course credits you need to complete them. It also tells how many credits you'll earn for each course.

Course Descriptions

After you look up the classes you need in section 2, you'll probably want to know what they're all about. Go to this easy-to-use section for that. Simply find the course number (see facing page) in section 2 and then look it up in this section. Everything in section 3 is in alphabetical order.

Program Availability

Ivy Tech offers many educational programs and degrees, but not all programs and degrees are offered at all 22 campuses. This section is designed to help you quickly find which programs are available at the Ivy Tech campus that interests you.

Faculty List and Accreditations

This section is simply a list of full-time instructors and their educational backgrounds. It also shows which organizations and agencies accredit Ivy Tech State College, its campuses, and programs.

Watch for symbols and terms.

A degree or certificate program requires different types of courses. There are four terms that describe course types: "**General Education**," "**Technical**," "**Specialty**," and "**Locally Determined**." Most degrees or certificates require some courses of each type. Other terms you'll see are:

Elective—The term "**elective**" means you can choose the class you want from those offered on your campus. These are marked with a "*".

Capstone Course—This type of course includes a component that assesses certain skills that will be expected of you as a graduate in the workforce. The assessment typically involves a written assignment. These are marked with a "^".

Locally Determined—This means your campus decides which classes you must take to complete the degree. In cases where you see courses marked with the symbol "**", it means that one of two courses is required and your campus decides which. In other cases, your campus determines which courses are required to fulfill the degree, based primarily on needs of local business and industry. Your academic advisor can tell you which classes are required.

The Ivy Tech Catalog Navigator

This tells the name of the educational program.

This is the type of degree.

This describes the course types and how many credit hours in each you need to earn the degree.

Visual Communications

ASSOCIATE OF APPLIED SCIENCE

To earn this degree, you must have 66 credits in the following areas.

General Education Core	18
Technical Core	18
Specialty Core	12-18
Locally Determined Courses	12-18

This tells how many credits you need to earn the degree.

This tells how many credits a course is worth.

You Must Have		Required Courses	Credit Hours
GENERAL EDUCATION	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	
	SCI 111	Physical Science	3
	**	Humanities/Social Sciences Course	3
	**	Humanities/Social Sciences Course	3
TECHNICAL	VIS 101	Fundamentals of Design	3
	VIS 102	Fundamentals of Imaging	3
	VIS 115	Computer Graphics	3
	VIS 201	Electronic Imaging	3
	VIS 205	Business Practices for Visual Artists	3
	VIS 207	Portfolio Preparation	3

Choose One of the Following Specialties

This is the specialty within the degree program.

This is the course name

GRAPHIC DESIGN SPECIALTY (30 CREDITS)

ART 111	Drawing for Visualization	3
ART 112	Electronic Layout	3
ART 114	Graphic Design	3
ART 115	Typography	3
ART 117	Production	3
ART 217	Advanced Graphic Design	3
	Locally Determined Courses	12

This is the course number.

College Profile

In just over 35 years, Ivy Tech State College—more popularly known as Ivy Tech—has grown from a mere idea to a thriving post-secondary institution.

In 1963, the Indiana General Assembly established Indiana Vocational Technical College as Indiana's first statewide vocational technical college and appropriated $50,000 for its development. Following the appointment of a state board of trustees, a president was named and the first training program was established in 1965. The General Assembly later authorized Ivy Tech's present structure of 13 regions to provide accessible technical educational opportunities to all Indiana citizens. Between 1966 and 1969, the 13 regions were chartered and their boards of trustees appointed. Later, Ivy Tech was given authority to grant diplomas and certificates, including one-year technical certificates and two-year associate degrees, and to offer general education courses needed for its technical education programs.

Ivy Tech's growth in its relatively short history has been impressive. Enrollment reached more than 66,000 in 1997-98. The College had only 3,233 students in the fall of 1968. Within the statewide Ivy Tech system, more than 2,300 full- and part-time faculty members teach in program areas offered in five instructional divisions: Business, Health and Human Services, Technology, Visual Technologies, and General Education and Support Services. In 1995, the Indiana General Assembly changed the name of the College to Ivy Tech State College.

College Mission

Ivy Tech State College is a public, statewide, open-access, community-based, technical college. The College's mission is to enable individuals to develop to their fullest potential and to support the economic development of Indiana. Ivy Tech prepares residents of Indiana with the general and technical education needed for successful careers or for continuation in higher education. The College provides courses, degree programs, counseling and related services, technical assistance, and community service to individuals, communities, and businesses and industries across the state. Ivy Tech promotes educational mobility through partnerships with local schools and other higher education institutions.

Ivy Tech's regional Business and Industry Training offices work closely with Indiana businesses to offer customized training, re-training and continuing education in response to specific company needs. These training programs are available at Ivy Tech or in-plant.

College Goals

1. To promote and expand access to programs and services that meet students' abilities, interests and potential.
2. To ensure that every graduate of an Ivy Tech program possesses the technical skills to be successful in the workplace.
3. To provide a wide range of continually improving educational programs and services to individuals, businesses, industries and communities throughout the state.
4. To contribute to Indiana's economic development by providing the skilled workforce needed to attract and retain businesses and industries.
5. To serve the diverse populations that reside in the state.
6. To promote opportunities for individuals who have the ability, potential and desire to continue their education at a four-year institution.
7. To promote mastery of the general education skills needed to be successful in higher education and in the workplace.
8. To increase educational participation in Indiana.

Ivy Tech Foundation, Inc.

Ivy Tech Foundation, Inc. is an Indiana nonprofit corporation established in 1969 to raise funds to serve the needs of Ivy Tech State College and its students.

The primary areas of the foundation's service are:

- Scholarships and grants-in-aid that allow students to enter the College and complete their studies.
- Loans for students who need temporary assistance until other sources of financial assistance can be obtained.
- Equipment purchases to increase the level of instructional quality in laboratories and classrooms.
- Funding for faculty enhancement opportunities and awards for excellence.
- Seed money for innovative educational programs of exceptional merit.

Ivy Tech Foundation, Inc. is exempt from federal income taxation under Section 501(c)(3) of the Internal Revenue Code. All gifts to the foundation qualify as charitable contributions for federal income tax purposes. In addition, these gifts qualify for a special Indiana state income tax credit.

College Calendar

Ivy Tech is on a semester schedule. Fall and spring semesters are 16 weeks long. The summer term is 11 weeks long. The college calendar varies by campus. Specific start and end dates can be obtained by calling one of the campuses listed on page 6.

Non-Discrimination and Equal Opportunity Policy

Ivy Tech State College provides open admission, degree credit programs, courses and community service offerings, and student support services for all persons regardless of race, color, creed, national origin, religion, sex, physical or mental disability, age or veteran status. Persons who believe they may have been discriminated against should contact the campus affirmative action officer or the Office of Student Affairs.

Ivy Tech State College is an accredited, equal opportunity/affirmative action institution.

Regional Accreditation Statement

Ivy Tech State College is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, 30 N.LaSalle Street, Chicago, IL 60601, (800) 621-7440.

Campuses

Ivy Tech serves Indiana through a network of 22 campuses. In addition, courses are offered in communities and workplaces across the state.

ANDERSON
104 West 53rd Street
Anderson, IN 46013-1502
Phone: (765) 643-7133
1-800-644-4882

BLOOMINGTON
3116 Canterbury Court
Bloomington, IN 47401-0393
Phone: (812) 332-1559

COLUMBUS
4475 Central Avenue
Columbus, IN 47203-1868
Phone: (812) 372-9925
1-800-922-4838

EAST CHICAGO
410 E. Columbus Drive
East Chicago, IN 46312-2714
Phone: (219) 392-3600

ELKHART
2521 Industrial Parkway
Elkhart, IN 46516-5430
Phone: (219) 293-4657

EVANSVILLE
3501 First Avenue
Evansville, IN 47710-3398
Phone: (812) 426-2865

FORT WAYNE
3800 North Anthony Boulevard
Fort Wayne, IN 46805-1489
Phone: (219) 482-9171
1-800-859-4882

GARY
1440 East 35th Avenue
Gary, IN 46409-1499
Phone: (219) 981-1111
1-800-843-4882

INDIANAPOLIS
One West 26th Street
Indianapolis, IN 46208-4777
Phone: (317) 921-4882
1-800-732-1470

KOKOMO
1815 East Morgan Street
Kokomo, IN 46903-1373
Phone: (765) 459-0561
1-800-459-0561

LAFAYETTE
3101 South Creasy Lane
P.O. Box 6299
Lafayette, IN 47903-6299
Phone: (765) 772-9100
1-800-669-4882

LAWRENCEBURG
575 Main Street
Lawrenceburg, IN 47025-1661
Phone: (812) 537-4010

LOGANSPORT
2815 East Market Street
Logansport, IN 46947-2152
Phone: (219) 753-5101

MADISON
590 Ivy Tech Drive
Madison, IN 47250-1881
Phone: (812) 265-2580
1-800-403-2190

MARION
1015 East Third Street
Marion, IN 46953-9370
Phone: (765) 662-9843
1-800-554-1159

MUNCIE
4301 South Cowan Road
Muncie, IN 47302-9448
Phone: (765) 289-2291
1-800-589-8324

RICHMOND
2325 Chester Boulevard
Richmond, IN 47374-1298
Phone: (765) 966-2656
1-800-659-4562

SELLERSBURG
8204 Highway 311
Sellersburg, IN 47172-1897
Phone: (812) 246-3301
1-800-321-9021

SOUTH BEND
1534 West Sample Street
South Bend, IN 46619-3892
Phone: (219) 289-7001
1-888-489-5463

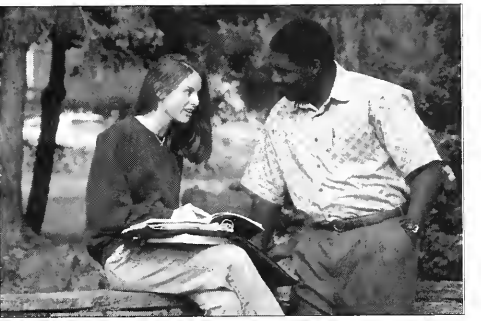
TERRE HAUTE
7999 U.S. Highway 41
Terre Haute, IN 47802-4898
Phone: (812) 299-1121
1-800-377-4882

VALPARAISO
2401 Valley Drive
Valparaiso, IN 46383-2520
Phone: (219) 464-8514

WARSAW
850 East Smith Street
Warsaw, IN 46580-4546
Phone: (219) 267-5428

CENTRAL OFFICES
One West 26th Street
Indianapolis, IN 46208
(317) 921-4800

Toll-Free: 1-888-IVY-LINE
Web Site: www.ivy.tec.in.us



College Services

ENTERING THE COLLEGE

Admissions Non-Degree Objective

Ivy Tech offers courses in many special career areas. Admission as a non-degree student can be achieved simply by filing a completed registration form in the Office of Student Affairs. High school students (age sixteen or greater) may take Ivy Tech courses with the written approval of the appropriate high school official. Non-degree students enrolling in general education courses must take the ASSET or COMPASS assessment for placement. Other non-degree students may elect to take the assessment.

Admissions Degree Objective

Ivy Tech is an open admissions College, accessible to all Indiana citizens past high school age. Some degree-granting programs have limited availability and have additional requirements prior to acceptance to those programs.

For admission as a student to one of Ivy Tech's programs leading to an associate degree or technical certificate, the standard requirements are a high school diploma or General Education Development (GED) certificate and an application for admission. Prospective students who are college graduates with an associate degree or higher from a regionally accredited institution may submit their college transcript in lieu of the high school diploma. Prospective students who have some college may submit their college transcript if the college transcript shows the high school graduation date. The Office of Student Affairs will assist the student on request in obtaining a high school or college transcript or GED scores.

To ensure student success, all degree-seeking students must participate in the ASSET/COMPASS assessment. The purposes of this assessment are to measure the student's achievement in mathematics, reading, writing, and to assist the student in the selection of appropriate courses. If the assessment reveals skill deficiencies, the student will be advised to complete appropriate developmental courses. Students may be eligible for financial aid during this period.

When the assessment indicates that the student will be better served in a different setting, that individual may be referred to an appropriate community resource offering the needed assistance. The applicant may enter the admissions process at a later date, following completion of skills upgrading.

Granting of waivers from the ASSET/COMPASS assessment is the responsibility of the regional academic officer or designee. Waivers will be granted to students who meet one or more of the following conditions:

- Possess an associate degree or higher from a regionally accredited college. The number of years since an associate or higher degree was earned is not relevant.
- Have completed comparable basic skills or general education courses in writing or math with a grade of "C" or better from a regionally accredited college. For purpose of waiving the reading portion, the prospective student must have completed a basic skills reading course or college-level general education course.
- Have comparable assessment scores (earned within the last two years) from a regionally accredited institution that are deemed acceptable by an Ivy Tech campus for appropriate course placement.

The College reserves the right to guide the enrollment of students in particular programs or courses on the basis of past academic records, academic counseling and assessment.

Students seeking admission to certain health occupation programs may be requested to take part in specific pre-enrollment assessments and/or interviews to fulfill College or external agency requirements. Prerequisites may be required before enrolling in certain programs.

Readmission

Should a course of study at Ivy Tech be interrupted, students may request readmission at a later date. This may be accomplished by contacting the Office of Student Affairs. Information on eligibility for financial aid will be available to returning students.

Limited Admissions Enrollment

Occasionally, the number of students admitted and enrolled in programs and/or courses may be limited by College resources or facilities—including available lab equipment and related support, or the number of available clinical work stations. The Office of Student Affairs should be contacted regarding programs which have limited access.

Admission Procedures and Support Documents—Degree Objective

1. The College requires all students to complete the student admission form.
2. Proof of high school graduation or GED completion is required for admission into a program leading to a certificate or a degree. The high school graduate or individual who has the GED should request the secondary school or testing center to send an official copy of the transcript or GED certification to the Admissions Office by the end of the first semester of attendance.
3. Career counselors/academic advisors are available to assist students in selecting a course of study at Ivy Tech.
4. The College requires that program-declared students provide acceptable standardized test scores or participate in the College's assessment program. Note: Students who have neither a high school diploma nor a GED must receive satisfactory scores on the College's assessment to be eligible for financial aid.
5. A student who wishes to transfer credit to Ivy Tech from another college must provide Ivy Tech with an official copy of the grade transcript from that institution before enrolling for courses if applying for financial aid, or no later than halfway through the first semester of enrollment or re-enrollment.
6. The College requires a physical examination for certain programs.

Advanced Standing

Students may be allowed to enter programs with advanced standing. Prior education and formal training may be considered for advanced placement. Credit may be awarded through transfer of credit from other postsecondary institutions, challenge examinations, the College Level Examination Program (CLEP), Advanced Placement (AP) tests, DANTES, or military experience. A score equivalent to a grade of "C" or higher on the CLEP or DANTES tests is required and a minimum score of 3 is required on AP tests.

Secondary Initiatives

Ivy Tech State College is implementing a secondary/postsecondary 2+2+2 education partnership with Indiana State University and high schools across Indiana. The partnership is designed to attract high school students into a technical education pathway that will lead to an associate degree, a baccalaureate degree, and even a graduate degree. The initiative has as a goal to change the way that younger Hoosiers, their parents, and educators view education and careers in technical fields.

Articulation pathways are being established to link secondary programs in areas such as electronics, business administration, automotive technology, and design technology with the associate-baccalaureate articulations in place between Ivy Tech and ISU. High school students may formally enter the 2+2+2 program in their junior year. The 2+2+2 programs will provide students with options to learn skills to go directly to the workplace, or other opportunities to complete a degree program in a timely manner.

Interested students should contact their high school counselor or local Ivy Tech campus.

Transferring to the College

The College encourages students who previously attended other accredited colleges and universities or adult education programs to forward transcripts to Ivy Tech by the midpoint of the first semester of enrollment or re-enrollment for consideration for transfer of credit and/or advanced placement. Students are responsible for providing pertinent course descriptions and/or copies of the college catalog(s) if further documentation is needed to facilitate the review. The College will be glad to assist individuals with evaluation of prior educational experiences. The College reserves the right to refuse admission or to conditionally admit those students who were dismissed for disciplinary reasons from other colleges or universities.

International Students

International students must meet College admission standards and certain other requirements. International students should apply for admission to Ivy Tech at least 90 days prior to the beginning of the term they wish to attend. International students must provide high school transcripts, which are subject to an equivalency evaluation. They must also demonstrate English language proficiency. The Test of English as a Foreign Language (TOEFL) with a minimum score of 550 is required.

International students must provide proof of adequate financial support for College fees and living expenses for each year while attending Ivy Tech. International students should submit a letter from an appropriate sponsor, government official or bank official stating that sufficient funds are available to cover the cost of the student's education and that these funds will be available to the student while attending college in the United States. International students must purchase the College's insurance coverage for medical, accident and repatriation expenses.

Student Orientation

All new degree students are encouraged to participate in a student success seminar/orientation program prior to or during the first week of classes. Orientation is designed to assist students in making the transition to a college environment. Topics include Student Affairs, financial aid, business office services, instructional programs, college activities, and policies and procedures.

Test-Out Procedures

Test-out policies vary from program to program. Students wishing to test out of a course should contact the program advisor. A fee of $10 per credit hour (subject to change by the State Board of Trustees) may be charged for the tests.

The general guidelines for test-out are:

1. Test-out examinations should be taken before registering for the course for which the test-out is attempted.

2. Test-out examinations are normally completed at one sitting (unless the test is offered in two parts-i.e., lab and written exams).

3. Test-out credits are not included in credit computations for financial aid programs or student grade point averages.

REGISTRATION

Registering for Courses

The registration process includes financial aid and program counseling, selection of courses and payment of fees. Newly admitted students will be notified when to register for their first classes. Specific days are set aside for registration before the beginning of each semester. Students should seek assistance in course selection from faculty advisors or counselors in the Office of Student Affairs before registering for classes. The Office of Student Affairs of each Ivy Tech region can supply information concerning registration.

Note: Students are registered when fees have been paid or payment arrangements have been made.

Open/Late Registration

Open registration is held before the beginning of the term. Registration after the first day of classes each term is considered late. Students may register after the first week of classes with the permission of the instructor. However, a late registration fee may be assessed any time after the first day of classes. For further information, contact the Office of Student Affairs.

Course Drop and Add

A student may drop or add a course in the first week of the regular semester. Students may be eligible for a full or partial refund of the assessed fees for courses dropped in the first four weeks of the semester. Courses are not officially dropped until the necessary forms have been completed and returned to the Office of Student Affairs. After the first week of the semester, students must receive the permission of the instructor to register for an added course.

Student Withdrawal

From the beginning of the second week to the end of the week marking the completion of 75 percent of the course, a student may withdraw from a course by filing a change of enrollment form at the Registrar's Office. (Students may be eligible for a full or partial refund of fees.) Records of students withdrawing from courses indicate a "W" status rather than a grade when the withdrawal process is completed. Withdrawal is complete when the necessary forms have been submitted to the Office of the Registrar. A student who ceases to attend class after the last day to withdraw will receive a grade commensurate with course requirements.

Note: Withdrawing from class may affect or cancel financial assistance. Further information is available from the Financial Aid Office.

COLLEGE FEES

The College seeks to provide quality education at the lowest possible cost. General fees are based on the number of credit hours for which the student has registered. Out-of-state students pay an additional fee per credit hour. For a current schedule of fees and further information, contact the Office of Student Affairs. Students or their families may be eligible for federal tution tax credits in accordance with the Taxpayer Relief Act of 1997.

Additional Expenses

The following additional expenses may apply, depending upon the program of study:

Books: All students are expected to purchase the textbooks for their respective programs. The cost of books varies by class.

Tools: The College furnishes major equipment items for instruction. However, in many programs or courses, students must furnish additional hand tools and equipment.

Uniforms and Other Special Equipment: Several programs require students to furnish uniforms and special safety clothing.

Payment of Fees

All enrolled students must make arrangements at the time of registration to pay all applicable fees. A student is officially registered and allowed to attend classes when all fees have been satisfied or arrangements for payment have been made.

Refund Policy

Students choosing to drop or withdraw from a course or courses must notify the College in writing using the drop-and-add or withdrawal form. The fee refund for voluntary withdrawal from a class, when applicable, will be processed only after the student files a College drop-and-add or withdrawal form with the Registrar's Office.

The College will refund student fees, with the exception of the late registration fee, on the following schedule for a regular semester:

From registration to end of first week of semester . . .100% refund

To end of second week of semester . . . . . .75% refund

To end of third week of semester . . . . . 50% refund

To end of fourth week of semester . . . . . 25% refund

After fourth week of semester . . . . . No refund

This schedule is based upon a 16-week semester calendar. Classes based on different calendars will have different refund schedules. The effective date for calculating the fee refund is the date of written notification on the drop-and-add form. Certain other fees may be refundable. Further details are available from the Office of Student Affairs. All refunds will be issued by check and mailed to the address shown on the student's registration form. Cancellation of credit courses by the College will result in a total refund of fees collected for those courses.

Federal regulations mandate the treatment of refunds for financial aid recipients. Financial aid funds must be returned to the government when College charges were paid by financial aid and a refund is given a student who fully withdraws from the College. Financial aid recipients may request more detailed information from the Financial Aid Office.

FINANCIAL AID

Ivy Tech participates in various types of federal and state financial aid programs which provide assistance to many students. Ivy Tech also provides financial assistance to students from its own resources. Students are encouraged to carefully explore all financial aid options at their campus.

Students must complete the Free Application for Federal Student Aid (FAFSA) to be considered for any form of financial aid. Financial aid is available for both full- and part-time students regardless of age, race or sex. To qualify for financial aid all applicable requirements must be met. For federal and state financial aid programs students must:

- Be a regular student enrolled or accepted for enrollment in an eligible program;
- Not be enrolled in secondary school;
- Be a U.S. citizen or national or permanent resident;
- Maintain satisfactory academic progress in a course of study;
- Not owe a refund to a federal grant or loan program.

Students who have completed the FAFSA and submitted all required documentation will receive an award letter detailing the financial aid programs offered. Any additional documentation required for an award or instructions for receiving payment will be mailed to the student. Procedures for obtaining federal loans vary by campus. Your campus financial aid office will instruct you on how to apply for federal Stafford loans. Detailed information on all financial aid programs is available at your campus financial aid office.

The following forms of financial aid are available to Ivy Tech students:

Hoosier Scholarship Program

The State Student Assistance Commission of Indiana may award from one to three scholarships per high school, based on the size of the graduating class. Candidates are nominated by their high schools. The Hoosier Scholarship is a one-time, non-renewable merit award in the amount of $500 for one academic year.

Higher Education Award Program (HEA)

Residents of Indiana may apply for Higher Education Awards (formerly called State Grants). Applicants must file the FAFSA by March 1 preceding their enrollment for the following fall semester. Awards are based on demonstrated financial need. Recipients of HEA awards must be enrolled full-time (12 hours or more per semester) to be eligible to receive the grant.

Ivy Tech and Foundation Scholarships

Ivy Tech awards scholarships provided by Ivy Tech Foundation and local civic and service organizations. Students should contact the Financial Aid Office for details concerning availability of these scholarships.

21st Century Scholars Program

Twenty-first Century Scholars may use their tuition scholarships at Ivy Tech. Students must complete the award affirmation and other required forms provided by the 21st Century Scholars Program office to receive the award by the specified deadline. Questions regarding this program should be directed to the 21st Century Scholars Program or the campus financial aid office. All 21st Century Scholars are eligible for other special types of assistance as well. Please contact the Office of Student Affairs for additional information regarding the 21st Century Scholars Program.

Federal Pell Grants

The largest financial aid program at Ivy Tech is the Federal Pell Grant program. This program provides grant funds for tuition and books for many Ivy Tech students. Since the grant is based on the student's need, enrollment status, cost of education at Ivy Tech and current level of federal funding, the grant amount varies from semester to semester and student to student.

Indiana Part-Time Grant

Residents of Indiana may be eligible for the Indiana Part-Time Grant. Applicants must file the FAFSA and be enrolled in at least 6 credit hours, but less than 12 credit hours and have completed at least 12 semester credits toward a two-year degree completion. Awards are based on demonstrated financial need.

Federal Supplemental Educational Opportunity Grant (FSEOG)

FSEOG is a federally funded student aid program which enables colleges to make grants to financially needy students to assist in the payment of educational costs. Awards vary each year.

Ivy Tech Grant Programs

Ivy Tech provides an extensive grant program. Each campus has a fee remission grant fund for students with special needs arising from unusual circumstances. Fee remissions are available under three separate programs:

- Ivy Tech Grant—Awarded on basis of need
- Ivy Tech Scholarship—Awarded on basis of merit
- Part-Time Scholars Opportunity Grant—Awarded on basis of need to part-time students

EMPLOYMENT AND LOANS

Federal Work Study Program

The Federal Work Study Program provides part-time employment to students who need financial assistance. Applicants must file the FAFSA and must be enrolled for at least 6 credit hours. Job assignments may be within the College or in public non-profit agencies in the community. The Financial Aid Office directs job placements after taking into consideration the amount of students' financial need, class schedule, and family or personal obligations. The starting hourly rate will be at least the federal minimum wage. Employment may consist of, but is not limited to, secretarial and clerical office work, maintenance or custodial work, duties in the Learning Resource Center (LRC) or work as lab assistants. Where possible, students are offered work study assignments in areas related to their career objectives.

State Work Study Program

Ivy Tech participates with the State Student Assistance Commission of Indiana in a state-funded Summer Work Study Program for financial-aid-eligible students who are residents of Indiana and plan to be enrolled full-time for the Fall semester. The purpose of this program is to help students who have received state-funded grants and scholarships to meet their remaining need.

Federal Stafford Loans

Low interest, federal Stafford Loans are available to eligible students who attend classes at least half-time (6 credit hours). Funding for these loans is provided by lending institutions but the application process is handled completely by the Financial Aid Office. The interest rate on Stafford loans varies from year to year and students are notified of the applicable rate at time of application. Need-based, subsidized Stafford loans are interest-free during in-school and grace periods. Non-need based, unsubsidized Stafford loans require the student to pay the interest while in school or request a deferment of interest until after graduation.

Repayment of Stafford loans begins six months after graduation, or when the student's class load falls below six credit hours per semester. Each student borrower is required to attend entrance and exit loan counseling sessions. These counseling sessions are held in the campus financial aid office. Students are notified of the days and times these sessions are available. Loan applications will not be processed if the student has not attended the required sessions.

Federal Parent Loan for Undergraduate Students (PLUS)

The PLUS program assists parents in financing the education of their dependent children when all other types of financial assistance have been denied or exhausted. Repayment begins within 30 to 60 days after the loan is made. The federal government does not subsidize interest on these loans.

Selected Reserve Educational Assistance Program

Members of the U.S. Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, Army National Guard or Air National Guard may be eligible for benefits under Chapter 106 of the VA Regulations. Eligible students should contact the Office of Financial Aid for additional information and applications.

Child of Disabled Veteran (CDV) Benefits

Children of deceased or disabled veterans may be eligible for veterans' benefits.

Indiana residents who are children of deceased or disabled veterans, or of veterans awarded the Purple Heart, may be eligible for a fee waiver at Ivy Tech if the parent's death, disability or Purple Heart award occurred as a result of military service during wartime. Inquiry concerning this benefit may be made at the Financial Aid Office.

Police and Fire Fighters Orphans and Spouses Benefits

Children and spouses of deceased, regularly paid, law enforcement officers and fire fighters are eligible for a fee waiver if the death occurred in the line of duty. Children and spouses of volunteer firefighters and city or county reserve police officers who died in the line of duty also are eligible for a fee waiver. The fee waiver is granted only to full-time students under the age of 23. Certification from the appropriate agency must be presented to the College in order to obtain the fee waiver.

Vocational Rehabilitation

Students with disabilities that may be considered barriers to employment may qualify for benefits through the Family Social Services Administration. The local office of the Division of Disability, Aging and Rehabilitative Services establishes the conditions of eligibility and awards assistance based on individual need. The division expects students to apply for the Pell Grant and other forms of financial aid through the school. However, if these resources are not sufficient to meet their needs, the division may provide additional funding. Further information is available from the local office of the Division of Disability, Aging and Rehabilitative Services.

Job Training Partnership Act (JTPA)

Students from economically disadvantaged backgrounds may be able to obtain assistance in acquiring vocational training or in upgrading occupational skills through the Job Training Partnership Act. For further information, contact the local Private Industry Council (PIC) Office.

Trade Readjustment Act (TRA)

The Trade Readjustment Act provides full tuition and fees, books and supplies to eligible students. Students should check with their local Department of Employment and Training Office to determine eligibility.

Employer-Funded Education

Many employers pay for full or partial expenses related to courses taken at Ivy Tech when the training offered relates to the employee's job responsibilities. Interested students should contact their employers to determine if such arrangements can be made.

Union Training Funds

Many unions have training funds available for members. Interested students should contact their unions regarding availability of training funds for use at Ivy Tech.

Veterans' Benefits

Students who served in the armed forces may be eligible for veterans' benefits. The Veterans Administration and, in many instances, the Department of Defense, determines eligibility. The amount of monthly educational allowance will depend on enrollment status and individual entitlement of each veteran.

Ivy Tech is obligated by law to evaluate past military and civilian training and education and award credit where appropriate. To accomplish this evaluation, veterans are obligated to provide the College with the necessary documentation of prior training and education. The evaluation must be completed within the time frame dictated by law and should be accomplished as soon as possible. Failure of the veteran to cooperate could result in VA benefits being terminated, retroactive to the first day benefits were received. The award of credit for previous training may allow the College to shorten the training program proportionately. The veteran should meet with the campus Veteran Affairs Coordinator at the earliest possible date. The veteran is responsible for attending classes and making reasonable progress toward an educational objective.

APPLICATION PROCEDURES FOR FINANCIAL AID

Application forms are available in the Financial Aid Office at all Ivy Tech campuses. Because application procedures, deadlines, eligibility regulations and refund policies vary with different types of student aid programs, interested students are encouraged to contact the Financial Aid Office at their earliest opportunity. Students should allow six to eight weeks for processing most financial aid applications. Students are encouraged to apply for assistance at any time. In general, the fall semester marks the beginning of the financial aid award year.

Financial Aid Appeals

The following steps are recommended to students who feel they have received unfair treatment in the financial aid process:

1. Schedule a personal conference with the manager of Financial Aid to discuss and resolve the issue.
2. If Step 1 is unsatisfactory, schedule a consultation with the Director of Student Affairs.
3. If Step 2 is unsatisfactory, schedule a conference with the Student Status Committee. This committee will make a recommendation to the Chief Administrative Officer to resolve the issue.

STUDENT RECORDS

Ivy Tech maintains an educational record for each student who is or has been enrolled at Ivy Tech. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the act and afforded to all students at Ivy Tech:

1. The right to inspect and review information contained in the student's educational records.
2. The right to challenge the contents of the student's educational records.
3. The right to a hearing if the outcome of the challenge is unsatisfactory.
4. The right to submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. The right to prevent disclosure, with certain exceptions, of personally identifiable information.
6. The right to secure a copy of the institutional policy.
7. The right to file complaints with the Department of Education concerning alleged failures by Ivy Tech to comply with the provisions of the act.

Each of these rights, with any limitations or exceptions, is explained in the Student Affairs Policy and Procedures Manual, a copy of which may be obtained in the Office of Student Affairs.

At the College's discretion, directory information may be provided in accordance with the provisions of the act without the written consent of the student unless the student requests in writing that such information not be disclosed (see below). The items listed below are designated as directory information and may be released for any purpose at the discretion of Ivy Tech unless a request for non-disclosure is on file.

1. Name, address, telephone number, dates of attendance.
2. Previous institution(s) attended, major field of study, awards, honors, degree conferred.
3. Past and present participation in officially recognized sports and activities, physical factors of athletes (height and weight), date and place of birth.

Students may request the withholding of directory information by notifying the Registrar's Office in writing, specifying the categories to be withheld, within ten (10) calendar days from the first scheduled day of the term. Ivy Tech will honor the request for one term only. Therefore, the student must file the request on a term basis. The student should carefully consider the consequences of any decision to withhold any category of directory information. Regardless of the effect upon the student, Ivy Tech assumes no liability for honoring a student's request that such information be withheld. Failure on the part of a student to request the withholding of

specific categories of directory information indicates the student's approval of disclosure.

In addition, student records are held in security by the College. Transcripts on file with the College from high schools and other institutions of higher education cannot be released by Ivy Tech. A student needing a transcript from high school or another college should request it directly from that institution. The Registrar's Office will assist students wishing to see and review their academic records and student files. Any questions concerning the student's rights and responsibilities under the Family Educational Rights and Privacy Act should be referred to the Office of the Registrar.

Dependency Provision

Ivy Tech reserves the right, as allowed under the Federal Educational Rights and Privacy Act of 1974, to disclose educational records or components thereof without written consent to parents of dependent students as defined according to the Internal Revenue Code of 1954, Section 154 (as amended). A certified copy of the parent's most recent federal income tax form establishing the student's dependency status shall be required before any educational records or components thereof will be released to the parent of any student.

ACADEMIC GRADING

The academic grading system has both grades and status codes, both of which are explained in greater detail later in this section. Grades reflect the quality of performance and level of competency achieved by students who complete a course. Formal grades are assigned at the end of each enrollment period. Instructors determine and assign grades and status based on objective appraisal and evaluation of the student's performance. Semester grade reports are sent to each student. The semester grade report is not sent to students who still owe fees.

In all courses, the quality of the student's work determines the grade earned. For some courses, quantity of work, speed of work, or both, also are considered in determining the grade. Class participation also may be considered by instructors in awarding grades. In certain instances, a status code appears on the student's record in place of a grade. Status represents a condition to which no letter grade can be assigned.

GRADES

The quality of student performance or competency level, as determined by the instructor at the completion of a course, is indicated by a letter grade of A, B, C, D or F. Ivy Tech does not use pluses and minuses as a part of its grading system. Each designation has a numerical value per credit hour, referred to as "quality points." The meaning and quality point value per credit hour of each letter grade are shown in the table below:

Status		Quality Points Per Credit Hour
A	Excellent	4
B	Good	3
C	Average	2
D	Below average	1
F	Failure	0

Status Codes

Status codes describe the state or condition of a course on the student's record for which a grade has not been awarded. Status code indications carry no quality points. The types of status codes and the symbols used to indicate them are shown below.

Status

I . . . . . Incomplete

AU . . . . Audit

S . . . . . Satisfactory

U . . . . . .Unsatisfactory

V . . . . . .Verified Competency

NW . . . No-Show Withdrawal

W . . . . . Withdrawal

These status codes are used for the following reasons:

I—Incomplete

"I" designations are received by students who have actively pursued a course and are doing passing work at the end of the course but who have not completed the final examination and/or other specific course assignments.

To remove an "I" designation, a student must meet with the instructor and make arrangements to complete course requirements in a specified period not to exceed 30 days beyond the start of the following term. The instructor must submit the grade within 31 calendar days of the beginning of the following term in which the student received the "I" designation.

AU—Audit

"AU" status indicates enrollment in a course for which no grade or credit is awarded. The fees for audited courses are the same as those for courses taken for credit. Audit status must be declared no later than the end of the first week of classes with approval of the instructor or program chairperson.

NW—No-Show Withdrawal

Instructors authorize the registrar to withdraw a student from any course for which the student did not report for the first two weeks of the semester and failed to notify the instructor of intent to continue. This administrative action is reflected on the official class list. No refund is processed. A petition for a refund with documentation for extenuating circumstances can be filed with the Business Office. Students can petition to be reinstated by receiving the approval of the instructor and completing the drop/add process.

W—Withdrawal

A "W" status code will be used for student and academic withdrawals. Student Withdrawal (W) is a terminal status referring to voluntary student withdrawal beginning at the start of the third week of the course up to the end of the week marking the completion of 75 percent of the course. To be considered officially withdrawn from a course, the student must file a withdrawal form with the Office of the Registrar. After 75 percent of the term has elapsed, a student may withdraw (with the same result as indicated above) only if documented extenuating circumstances are submitted to and approved by the Chief Academic Officer or his/her designee.

S—Satisfactory

The "S" indicates satisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration.

U—Unsatisfactory

The "U" indicates unsatisfactory completion of course work in situations where either a status of satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement. Requests for this type of grading must be declared at time of registration. The "U" differs from an "F" in that quality points are not computed.

V—Verified Competency

The "V" indicates satisfactory completion of course work in situations such as test-out, credit for experience or training, College Level Examination Program (CLEP), etc. Credit gained through this method may be used to satisfy degree requirements. This status is approved by the Chief Academic Officer upon recommendation of a faculty advisor following completion of necessary verification and documentation of competency.

Credit Hours

Credit is described in semester hours (the number of credits taken per semester). The number of credits is determined by the demands of the course, course work and by the number of contact hours - the hours actually spent in the classroom or laboratory.

Credit Hours/Load

A credit hour represents one hour of lecture, two hours of laboratory or three hours of clinical instruction per week for the semester. A three-credit-hour lecture course, for example, meets 48 hours during the semester (3 hours/week x 16 weeks). An average full-time semester class load in most Ivy Tech programs consists of 12-15 credit hours. A class load of more than 17 credit hours requires approval of the Chief Academic Officer or a designee.

Enrollment Status

Enrollment status is determined by registered total semester credits:

Full-time student . . . . . 12 or more credits per semester

3/4 time . . . . . 9-11 credits per semester

1/2 time . . . . . 6-8 credits per semester

Less than 1/2 time . . . . . 1-5 credits per semester

A first-year student, by definition, is one who has completed 30 or fewer semester credit hours. A second-year student is one who has completed 31 or more semester credit hours.

Quality Points

Quality points are numerical values indicating the quality of student performance in credit courses: A=4; B=3; C=2; D=1; F=0. The quality points earned for a course equal the quality point value times the number of credits. A student who earns an "A" in a four-credit course earns 16 quality points: the quality point value (4) x the number of credits (4) = the total quality points (16).

Grade Point Averages

The grade point average (GPA) is a numerical indication of the student's performance in all courses in which quality points can be earned. The GPA is calculated by dividing the number of quality points earned by the number of credits earned. The term and cumulative GPA, calculated to three decimal places, will appear on each grade report.

Under extenuating circumstances, a student may petition the Academic Status Committee to exclude hours of coursework from the cumulative GPA calculation. Courses excluded from the cumulative GPA calculation as a result of a petition will not be counted as earned and cannot be used to satisfy program requirements for degree-declared students. Contact the Office of Student Affairs for additional information.

Improving a Grade

Students, with the approval of faculty advisors, may attempt to improve D or F grades by repeating courses (allowable once in most programs). Financial aid recipients, however, should review their situations carefully since payment for repeated courses can be disallowed. Permanent student records contain complete files on all activity. The student's grade point average will reflect the highest grade earned.

Dean's List

The Dean's List, prepared and published each term, gives recognition to degree-seeking students who achieve a minimum 3.50 grade point average in non-basic skills courses with no Ds or Fs while earning 6 or more Ivy Tech credits during the semester and have earned at least a total of 12 credits during their course of study.

Grade Reports

Final grades are mailed to the address on the registration form. Grade reports are not sent if there are outstanding financial obligations to the College.

Attendance

Regular attendance is expected at scheduled class meetings or other activities assigned as part of a course of instruction. Attendance records are kept by instructors. When personal circumstances make it impossible to attend scheduled classes and activities, the College expects students to confer with instructors in advance. Instructors can offer students the option of making up the material missed.

Absences may be considered by instructors in awarding grades and considering involuntary withdrawal. Students who must interrupt their Ivy Tech training to fulfill Reserve and National Guard annual tour requirements should present official military orders to their instructors prior to departure for duty. Students are not excused from completion of the course work and should make arrangements with their instructors to complete all work.

STANDARDS OF PROGRESS

Students who have declared a certificate or degree objective and who have 15 or more cumulative credit hours attempted must maintain a 2.00 minimum cumulative grade point average (GPA) to remain in satisfactory academic standing. Students receiving financial aid must demonstrate satisfactory progress toward completion of a program within a specified time frame based on their enrollment status. Students also must successfully complete the minimum number of credit hours required for that status each semester. All students are expected to maintain a cumulative 2.00 GPA to be eligible for graduation. Questions about standards of progress and academic standing should be addressed to the Office of Student Affairs.

Special Problems

The Office of Student Affairs is available to help with special problems, exceptional circumstances, and filing grievances (see Student Grievances). Special problems, exceptional circumstances, and grievances are ultimately the responsibility of the Chief Administrative Officer of the region, designated staff and committees.

ASSESSMENT

It is the mission of Ivy Tech State College to enable individuals to develop to their fullest potential and to support the economic development of Indiana. To this end, an assessment program is conducted College-wide to measure student progress toward educational goals, to determine academic progress, to improve teaching and learning, and to evaluate institutional effectiveness. Student assessment is part of the College's educational program. What Ivy Tech discovers through the assessment program is used in making decisions about everything the College does from curriculum planning to student activities to support services. From the time students apply to the College until the time they leave, students are expected to participate in a series of tests, surveys, and evaluative activities intended to:

- Assess students' academic history and academic skills for accurate advisement and course placement at entry;
- Obtain information on students' satisfaction with College courses, programs and services through such instruments as the ACT Student Opinion Survey;
- Measure gains and competencies students have made academically while at the College through a variety of general education measures focused primarily on reading, writing, and critical thinking; and
- Demonstrate mastery of technical skills through program outcome measures such as portfolio, licensure exams, and other standardized exams.

These tests, surveys and evaluative activities are used to help students achieve their individual goals and to improve College services and programs for all students. Students' earnest and sincere participation in surveys, tests, learning tasks, exit exams and portfolio development provides the College with accurate information to plan increasingly effective programs and services. In this effort, students become partners in the assessment and learning process.

GRADUATION

The associate of science degree, the associate of applied science degree or the technical certificate is awarded by the College to students who meet graduation requirements. Graduation ceremonies are held once a year. Graduating students may be charged a fee to cover the cost of the ceremonial cap and gown.

A student is considered eligible for graduation when requirements for graduation have been fulfilled. Each student entering the final semester prior to graduation must complete an application for graduation. The application will be certified by the student's program advisor and forwarded to the Registrar's Office, where the appropriate diploma will be prepared.

Graduating students will participate in outcomes assessments. To graduate with an associate of science degree, an associate of applied science degree or a technical certificate, the student must:

1. Attain a minimum grade point average of 2.00 in the required technical and general education courses;
2. Earn 15 credits as a regular student of Ivy Tech rather than by test-out or other means of advanced placement;
3. Successfully complete the required number of credits;
4. Satisfy all financial obligations due the College; and
5. Satisfy program accreditation standards that may have additional requirements.

TRANSFERRING TO ANOTHER INSTITUTION

Ivy Tech has articulation agreements, under which students may transfer individual courses or entire programs of study to a number of public and private institutions. A student, depending on his or her goals, may choose to transfer to another college or university and pursue a bachelor's degree after completion of a series of courses or completion of a two-year degree program at Ivy Tech. Some of these agreements are Collegewide and some pertain to specific campuses of Ivy Tech.

The selection of an institution for transfer should be an individual decision based upon the extent to which credits will transfer, compatibility of degree programs, location, availability of programming, philosophy, and cost of attending the transfer school. Opportunities are available to Ivy Tech students to transfer and complete a baccalaureate program as a resident or commuting student. In addition, opportunities are available to pursue a bachelor's degree using distance technologies, which will allow a student to complete a degree program within the home community, even at an Ivy Tech campus.

DEGREE *Link*
CONNECTING FOR EDUCATIONAL SUCCESS

Through the DegreeLink partnership between Ivy Tech and Indiana State University (ISU), students may complete an articulated associate of science degree program and transfer to ISU as a junior year student. Students completing associate of science degrees in the linked programs may pursue bachelor's degrees in Electronics Technology, Business Administration, Industrial Automotive Technology, Mechanical Technology, Community Health, Manufacturing Technology, and Computer Integrated Manufacturing Technology. ISU also provides more general opportunities for graduates of a variety of programs for earning a bachelor's degree in Industrial Supervision, General Industrial Technology, and Human Resources Development. Students may complete these bachelor's programs on ISU's Terre Haute campus, and for certain programs may be able to complete the bachelor of science through coursework brought to Ivy Tech campuses using distance technologies. For students interested in exploring these options, the

associate of science curriculum for achieving maximum transferability is detailed in the related program descriptions in this catalog. Under the Bridge to ISU program, students who have not been accepted to the university as freshmen are referred to the local Ivy Tech, where they can begin their education and later continue at ISU.

Students may pursue an articulated bachelor of science in Business Administration at Ball State University (detailed in the Business Administration program section), and transfer a wide range of other general and technical coursework to Ball State. The Connect program provides an option for students who have not been accepted to Ball State as freshmen, under which they can enroll at Ivy Tech. Students successfully completing the Connect program are guaranteed admission to Ball State.

Ivy Tech is also a member of the ABELINC project, a collaborative partnership involving selected two-year colleges across the country and Governors State University (GSU), a state university in Illinois. The ABELINC project, through its Board of Governors Bachelor of Arts (B.A.) degree program, serves adults who are mobile, work full-time, live in areas under-served by four-year institutions, and/or find it difficult to complete their baccalaureate programs through traditional, campus-based programs. Students may take up to 80 credit hours at Ivy Tech that will apply toward the 120 credit hours required for the B.A. Students may complete the entire Bachelor of Arts program in their home community.

Please consult your local Ivy Tech campuses about the availability of additional transfer courses and programs.

STUDENT SUPPORT SERVICES

Basic Skills Advancement Program Services

To ensure that every student has the opportunity to be successful, Ivy Tech offers Basic Skills Advancement programs. These developmental programs are designed for students enrolled in regular programs or courses at the College who are encountering academic difficulty or who have been identified as having encountered academic difficulty in the past. Services provided through the Basic Skills Advancement program include diagnostic testing and assessment, course placement services, and instruction.

The need for these services may be identified at the time of admission. However, a student may use any or all services upon encountering academic difficulty during a course of study. Professional basic skills advancement instructors and laboratory technicians provide developmental instruction in the areas of math, communications, sciences, writing, and study skills. Some campuses offer GED preparation and English as a second language (ESL). Delivery of instruction may be in the form of a basic skills advancement course in a classroom setting, one-on-one tutorial assistance, or a self-paced study in the Basic Skills Center. For further information about the College's Basic Skills Advancement programs contact the Office of Student Affairs or the Basic Skills Center.

Counseling and Academic Advising

Each campus provides counseling to all interested students. Students may obtain individual counseling and/or assessment to assist them in identifying their abilities or occupational interests. Counseling and assessments also are helpful in developing education and career plans. Students are encouraged to seek assistance in selecting an occupation and the necessary training from the Office of Student Affairs.

In addition to the counseling program offered by the Office of Student Affairs, the College uses a faculty advisor system. On admission, each degree student is assigned a faculty advisor whose purpose is to:

1. Assist the student in course selection and program planning,
2. Guide the student in meeting the requirements for graduation as prescribed by the College,
3. Ensure that appropriate technical and general education courses are included in the chosen course of study.

Career and Employment Services

Candidates for graduation who desire job placement assistance may contact the Career and Employment Services Office, which will:

1. Advise candidates of the College's career and employment services.
2. Provide occupational information, including employment trends, and local and state occupational outlook data.
3. Assist the registered candidate in preparing a packet of credentials for use in finding a job. The packet may include:
    a. A resume of the candidate's education and employment experience, and
    b. Personal letters of recommendation verifying the student's employability.
4. Create folders containing original copies of the candidate's credentials for all registered candidates, and
5. Prepare copies of credentials released by the candidates for referral to prospective employers. Alumni may update their credentials whenever they wish to use the Career and Employment Services Office.

Students or alumni registered with the Career and Employment Services Office will be informed of employment opportunities known to the Career and Employment Services Office. Employers who register with the Career and Employment Services Office are given the names of all qualified candidates without regard to gender, race, age, national origin or disability. Registered students or alumni are eligible for interviews with appropriate prospective employers. Career and Employment Services provides many types of services to all students, some of which are resume writing preparation, career fair information, and assistance in finding part-time work while in school. See the Office of Career and Employment Services for additional information.

College Bookstore

Each campus maintains a bookstore where students may buy textbooks and supplies. College sweaters, jackets, souvenirs, and other items also are available for purchase.

Library

Libraries at each campus provide access to materials, information, and services that support students' educational needs. In addition, libraries have career exploration materials, inter-library loan services, general and technical periodicals, recreational reading, and audio-visual materials and equipment.

Students with Disabilities

Reasonable accommodations for persons with disabilities will be made to ensure access to academic programs, services, and employment in accordance with section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. College programs and facilities are designed to be accessible to students with disabilities. Each campus has designated parking and special restroom facilities for these students. Support services also will aid students with disabilities with career planning, financial aid, and placement. The College staff works with the Department of Vocational Rehabilitation and other service agencies to assist students with disabilities through available local community resources.

It is the student's responsibility to contact the campus Disability Services representative to request accommodations; any information shared will be kept confidential unless the student authorizes release and exchange of specified information. Requests for accommodations and documentation of disability must be received one month prior to enrollment for the next academic term. Additional time may by required for some requests. Every effort will be made to provide reasonable accommodations in a timely manner.

STUDENT ORGANIZATIONS

Organizations and Activities

The College recognizes the educational, recreational and social values of student organizations and extracurricular activities. Students are encouraged to participate in any or all phases of the student activities program as long as participation does not interfere with studies.

All student organizations operate under the policies and guidelines set for the College by the State Board of Trustees. Approval by the Student Government and the administration is required of all student organizations seeking to make use of College facilities. All approved organizations must be open for membership to all eligible candidates and must make available to the Student Government records of officers, membership and financial transactions.

Student Government

Students in each region are provided opportunities to participate in student government through the Student Government. The Student Government is the representative governing body of the students. Student Government representatives are elected or selected according to the by-laws of each regional Student Government constitution and serve as stated in those bylaws. The student body membership may consist of representatives of each program area and an advisor as established in the by-laws.

The Student Government was established by students to encourage participation in student government and to promote College spirit and recognition. The Student Government exercises

the authority, unless otherwise delegated, to legislate on student matters, subject to the approval of appropriate College administrative offices.

The constitutions of all student organizations must be approved by a quorum of the Student Government, consisting of a simple majority of the total membership and one staff advisor or as otherwise stated in the by-laws.

The functions of the Student Government include:

1. Communication of bona fide concerns of the student body to appropriate College officials with suggestions for improvement.
2. Approval of student organizations beneficial to student life and worthy of being part of the College.
3. Assurance that copies of the constitution, by-laws and statement of purpose and objectives of each recognized student organization are on file in the Office of Student Affairs.
4. Referral of student grievances concerning disciplinary matters or student status to the Committee on Student Status and referral of other types of student grievances to appropriate College officials.
5. Planning and conducting appropriate extracurricular student activities.
6. Submission of student activity budgets for review and approval by the regional officials.

Phi Theta Kappa

Phi Theta Kappa is a national honor fraternity for two-year colleges. Its purpose is to recognize and promote academic excellence. This is done by providing leadership development opportunities for service in chapter activities on campus and regional Phi Theta Kappa activities. Membership in Phi Theta Kappa is by invitation only and is based on a minimum grade point average as well as completion of a specified number of semester hours. Contact the Office of Student Affairs for further information.

Intramural Sports

College sports activities consist of intramural sports sponsored by the Student Government. Leagues can be formed when student interest justifies their organization. All sports activities of the College must be approved and sponsored by the Student Government and the administration.

Clubs

Students wishing to organize hobby, social or special interest clubs should submit proposals to the Student Government, which will determine whether sufficient interest exists. The Student Government is authorized to charter the club upon approval by the administration. Each club must have officers and a staff advisor.

Social Activities

All group activities of the College must be approved and sponsored by the Student Government and the administration. Classes, clubs and other groups should plan and conduct social activities pertaining specifically to their members. The Student Government organizes and conducts social activities and gatherings in which all students and their guests may participate.

Professional and Trade Organizations

Student chapters of various professional and trade organizations are formed in the same manner as other student organizations and are subject to the same requirements.

Ivy Tech State College Alumni Association

Many of the regions have established chapters of the Ivy Tech Alumni Association. Membership in the Association is open to current and former students. Contact the Office of Student Affairs for further information.

HOUSING

Ivy Tech is a commuter campus and does not operate residence halls. However, the Office of Student Affairs may be able to respond to questions concerning housing in the community. Ivy Tech accepts no responsibility for locating, approving or supervising local student housing.

STUDENT PARKING

As part of registration, some campuses require students to register their motor vehicles and obtain a parking sticker. A special permit is required to park in handicapped spaces. Stickers are to be displayed in the vehicle while parked on campus, and students may park only in designated student parking areas. Vehicles improperly parked in areas reserved for the handicapped, visitors or others may be towed at the expense of their owners.

STUDENT ACCIDENT INSURANCE

For students registered in credit courses, the College provides accident insurance in a designated amount for injuries sustained while participating in College-sponsored activities. The activity must take place on College premises or on any premises designated by the College. Students are also covered while traveling to and from College-sponsored activities as a member of a group under College supervision. It is the student's responsibility to report injuries promptly to the instructor or to the Office of Student Affairs. The insurance is for a specified minimum amount of coverage. It is not intended to replace insurance coverage students may already have. Students should review their own coverage. The master insurance policy issued to Ivy Tech is on file at the central administrative office. The description of the hazards insured, benefits and exclusions is controlled by the master policy. Students with questions may contact the regional Office of Student Affairs.

STUDENT HEALTH INSURANCE

The College has made arrangements for Ivy Tech students to obtain health insurance. Insurance coverage is purchased directly from the insurance company by the student. Application forms and brochures explaining coverage and rates are available through the Office of Student Affairs during course registration periods. Coverages and rates are subject to change.

ACCIDENTS AND ILLNESSES

Ivy Tech State College does not provide a health services center. Many community agencies are available to assist students seeking counseling or treatment. Students who experience illnesses should seek the advice of their family physician. If a student has an accident on College property, the student should report the accident to campus security or the Office of Student Affairs. If a student suffers an accident or illness while attending classes, the student should notify the instructor. If paramedic services or hospitalization is required, the student is financially responsible.

If a student is suffering from an illness that makes it impossible to attend classes, the student should contact his/her instructors.

EMERGENCY CLOSING OF CAMPUSES

Severe weather conditions or other emergencies occasionally make it necessary to close a campus. Each campus has designated local radio stations to announce information on closings.

STUDENT RIGHTS AND RESPONSIBILITIES

Student Conduct

The reputation of Ivy Tech in the community depends in large part upon the behavior of its students. Students enrolled at the College are expected to conduct themselves in a mature, dignified and honorable manner. Students are entitled to a learning atmosphere free from discrimination, harassment, sexual harassment or intimidation.

Students are subject to College jurisdiction while enrolled at Ivy Tech. The College reserves the right to take disciplinary action against any student whose conduct, in the opinion of Ivy Tech representatives, is not in the best interests of students or the College.

All Ivy Tech students are expected to abide by the following College rules of conduct. "Student" refers to a student, a group of students, a prospective student or a group of prospective students.

College Rules

1. **Alcoholic Beverages**: Under Indiana law, consuming, being under the influence of or possessing intoxicating beverages on College property is not permitted.
2. **Illegal Use of Drugs**: Under Indiana law, being under the influence of, use of, possession of or distribution of illegal drugs is not permitted.
3. **Smoking**: Under Indiana law, all Ivy Tech buildings are classified as "non-smoking" facilities. Smoking is permitted only in designated areas.
4. **Assembly**: Assembly in a manner that obstructs the free movement of others about the campus, inhibits the free and normal use of the College buildings and facilities, or prevents or obstructs the normal operation of the College is not permitted.
5. **Signs**: Students may erect signs on campus or display signs or posters on designated bulletin boards after receiving written approval from the appropriate College official.
6. **Solicitation of Funds**: Individuals or organizations who wish to use campus facilities or plan to solicit funds on a campus must first obtain written approval from the appropriate

College official.

7. **Arms/Deadly Weapons**: Under Indiana law, possession of firearms (except those possessed by police officers) is prohibited on College property or at any College-sponsored activity held elsewhere.

8. **Cheating**: Cheating on papers or tests is a violation of College rules.

9. **Counterfeiting and Altering**: College policy states that copying or in any way altering any record, document or identification form used or maintained by the College is not permitted.

10. **Theft of Property**: Theft of personal or College property is a violation of College rules.

11. **Vandalism**: Destruction or mutilation of Ivy Tech books, magazines, equipment or buildings is a violation of College rules.

12. **Use of College Facilities**: Students are permitted on campus during normal published Ivy Tech hours and at other times established in the College calendar. Students wishing to use College facilities at other times must request permission from the appropriate College official.

13. **Financial Responsibility**: Students must pay all fees, fines or loans in a timely manner.

14. **Motor Vehicles**: Students must comply with parking regulations. Handicapped parking spaces and visitors' areas are reserved for those purposes and vehicles improperly parked in those areas may be ticketed or towed at the expense of their owners.

15. **Harassment, Sexual Harassment and/or Intimidation:** Conduct causing alarm, threats of crimes against persons or their property or unwelcome sexual advances or requests for sexual favors violate law and College policy. Harassment or intimidation of persons involved in a disciplinary hearing or of persons in authority who are discharging their responsibilities also violate College policy. All such acts are not permitted by the College.

General Computer Resources Policies

In addition to the above rules, specific rules govern the use of College computing equipment. Those are as follows:

- Computer resources are defined as including, but not limited to, hardware, software, systems, networks, data stored, transmitted or accessed using College computers and college-provided access to e-mail, Intranet, Internet, World Wide Web, or any other internal or external service, server or provider.

- Access to and use of College computer resources is an educational opportunity which is a privilege extended by Ivy Tech State College to students, employees and other authorized users to promote the mission of the College and increase the effectiveness of students, faculty and staff. Any activity which violates local, state or federal law or ignores common standards of honesty, privacy and decency is also a violation of this policy.

- College computing resources are to be used to advance the College's mission of education and public service. These resources are provided to faculty, staff, students and other authorized users for purposes related to their studies, their responsibilities for providing instruction, the discharge of their duties as employees, their official business with the College, and other College authorized activities.

- The College acknowledges, however, that occasionally faculty, staff, and students use College computing resources assigned to them or to which they are granted access for non-commercial, personal use. Such occasional non-commercial uses are permitted by faculty, staff and students if they are not excessive; do not incur costs; do not interfere with the efficient operation of the College, its employees, or its computing resources; are not prohibited by the supervisor or faculty; and are not otherwise prohibited by this policy or any other College policy or directive. The College will not provide technical support for any use not directly related to College business.

- Computing resources may not be used for any purpose which is illegal, immoral, unethical, academically dishonest as in plagiarizing or cheating, damaging to the reputation of the College, inconsistent with the mission of the College, or likely to subject the College to liability as determined solely by the College.

Unless approved or endorsed by the College, College computer resources may not be used to:

1. Promote, advertise, sell or create products or services as part of a personal or private business venture or intended for personal profit.

2. Promote, advertise, sell or create products or services of another organization not supported or endorsed by the College.

3. Promote, advocate, criticize or lobby for or against political causes, issues, office holders or candidates; religious beliefs, ideas, organizations or materials; external organizations not supported or endorsed by the College or part of normal College activities or an employee's assigned duties.

4. Send, post, download, print, or intentionally receive or display information outside the scope of employees' normal duties or students' approved academic studies and research which concerns:

   - Political causes, office holders or candidates.
   - Religious beliefs, organizations or materials.
   - Pornographic or harassing materials.

5. Play or participate in:

   - Networked or on-line games
   - Networked or on-line chat rooms or list servers not related to College business or academic studies.
   - E-mail chain letters

Displaying on a computer screen or printing materials that violate the College's harassment/ intimidation, or prejudice policies is prohibited. This policy includes, but is not limited to, computers located in student labs and employee offices. Violators shall be subject to the appropriate disciplinary actions set forth in the Employee Handbook, the Student Handbook and the Student Affairs Policies and Procedures Manual.

The use of any materials, logos or other items copyrighted by Ivy Tech State College without the express permission of the college is prohibited.

Misuse of computer resources and violations of these policies may subject users to disciplinary actions. Users may lose their College computing privileges and face other disciplinary actions as outlined in the Employee Handbook, Student Handbook, and Student Affairs Policies and Procedures Manual. Illegal activity involving College computing resources may also subject violators to prosecution by local, state and/or federal authorities.

College Computer Services, regional computing services, and academic and administrative departments have responsibility for providing and maintaining shared computing resources. The amount of information that can travel at one time across communication lines is limited. All users of College computing resources are required to follow these general computing guidelines out of respect for system performance and the cooperative spirit among system users.

A. Privacy

The College has the right to review any use of College owned and leased computer resources and any materials stored on these resources. In addition, the College reserves the right to perform these reviews without the prior knowledge of the individual user. All users of College resources must respect the rights of others, respect the integrity of the physical facilities, and comply with all applicable laws, regulations, licenses, contracts, and College policies. As a public institution,

the College may be required to release information to outside agencies. Users are cautioned to exercise due diligence and not store information that they consider personal in nature on College resources.

B. Virus Prevention

Viruses pose a direct threat to the viability of College data. In order to help protect College computer systems, users must take necessary precautions and virus scan the following sources of information prior to installing on or while downloading to any College operated computer system:

1. New software
2. E-mail attachments
3. Internet downloads

As an added precaution, computer systems must be scanned on a regular basis.

C. Software Use

Users must follow the copyright laws, trademark standards, software license agreements, and patent information governing software. Unauthorized copying of licensed software is illegal. The College will not provide support to users with software in violation of copyright laws. Such software will be removed when detected. To determine the copyright policies for College-owned software, employees should contact their supervisor. Students should contact the appropriate faculty member.

D. E-Mail Use

1. E-mail is not considered to be private. Electronic mail which is composed, sent, received, or stored on College equipment may be subject to monitoring and review. Do not send any e-mail message which you would not want reviewed by a third party.
2. As a public institution, the College may be required to release contents of electronic mail to outside agencies.
3. E-mail accounts are backed up as a regular course of network operation. The deletion of an e-mail message does not remove all copies of the message.
4. Once sent, an e-mail message will not be deleted or altered by Computer Services, system administrators, or any other College sponsored parties.
5. The College is not liable for lost or deleted messages.
6. Sending excessive, annoying, threatening, or harassing messages is prohibited.
7. Employees or student groups that wish to make solicitations via e-mail must first receive the written permission of the appropriate College Officer or a designee.
8. The use of another individual's e-mail identification or the use of a false e-mail identification is prohibited.
9. The College will not provide technical support for personal e-mail transmissions.

E. Internet Use

The purpose of the Internet and the World Wide Web is to facilitate information gathering and communication in support of research and education by providing access to unique resources and collaborative efforts.

The use of the Internet is an educational opportunity which is a privilege. Inappropriate use, use at inappropriate times, or any violation of the conditions and rules for use, may result in cancellation of a user account. Ivy Tech State College and its management reserves the authority to determine appropriate use and may deny, revoke, suspend or close any user account at any time based upon a determination of inappropriate use.

1. Users shall not use the Internet resources for non-academic activities which disturb system efficiency (including Internet "chat rooms" and network versions of multi-user games).

2. Users may encounter materials which may be considered inappropriate or controversial. It is the user's responsibility not to initiate access to such material, and not to disseminate it further.

3. Home pages created by Ivy Tech faculty and staff and representing courses or products of the College are subject to review by and approval of the appropriate College Officer or a designee.

4. Users should be cautious about accepting programs for the purpose of data collection by an Internet-source (often referred to as "applets" or "cookies"). These programs may allow unauthorized access to data stored on individual computers or networks.

5. The College assumes no responsibility for any direct or indirect damages arising from the user's connection to the Internet.

6. Ivy Tech State College is not responsible for the accuracy of information found on the Internet. The College merely facilitates the access and dissemination of information through its systems. Unless the College expressly authors content, it has no editorial control over the content distributed or disseminated on the Internet. Users are solely responsible for any material they access and distribute.

F. Intellectual Property Rights

Materials created and/or produced while using College-owned resources may be subject to intellectual property rights as established by the College.

G. Personal Hardware and Software

1. Personal hardware should not be attached to or installed in College equipment. Any exception should be approved by the appropriate College official and the regional computer services designee. College Computer Services should be informed as well.

2. Personal software is not to be installed on Ivy Tech equipment. Exceptions must be approved by the department supervisor and original license documentation must be on file.

Any damage to College equipment that occurs due to the attachment of personal hardware or software may be the responsibility of the owner of the personal hardware or software. All personal hardware or software attached to College equipment is subject to College computing policies. The College is not liable for any maintenance, repair, or replacement of personal hardware or software.

College computer resources approved for use on personal equipment are the property of the College and must be removed and remitted upon leaving the College.

H. Disclaimer

User hereby agrees to indemnify and hold Ivy Tech State College and its officers, Trustees, employees and agents harmless for any loss, damage, expense or liability, including reasonable attorneys fees, resulting from any claim, action or demand, arising out of or related to the user's use of Ivy Tech State College owned computer resources. Such claims shall include, without limitation, those based on trademark or service mark infringement, trade name infringement, copyright infringement, dilution, tortious interference with contract or prospective business advantage, unfair competition, defamation, unlawful discrimination or harassment, rights of publicity, and invasion of privacy.

Student Computing Policies

Students must follow the guidelines presented in this section as well as the General Computing Guidelines.

A. Access to Computer Resources

1. General-purpose computer labs are available on campus for currently enrolled students to complete their course work. Hours of operation are posted. Students are expected to follow the particular rules for any lab they use.

B. Authorized Uses of College-Owned Computer Systems

1. Students may use available College-owned computer systems in general-purpose computer labs to complete assignments for Ivy Tech courses and articulated programs. Because the number of computer workstations and network connections is limited, course work has priority for computer use.
2. Students may use College-owned computer systems for career and job exploration and resume preparation.
3. Students may use College-owned computer systems for "exercises" which promote self-taught learning.
4. Students may use College-owned computer systems for projects for College-sponsored clubs and organizations.
5. Use of College computer resources for any purpose other than those specifically authorized in this section must be approved by an appropriate faculty member.

C. Unauthorized Uses of College-Owned Computer Systems

1. Students may not use College-owned computer resources to prepare or print work for commercial purposes.
2. Printer Limitations
    a. Printers are intended for class-related activities. Printing Internet web pages or other information not directly related to an authorized use is prohibited.
    b. Excessive printing is prohibited. Students must follow lab guidelines limiting the number of copies or pages that may be printed.
    c. Using non-approved paper in a College-owned printer is prohibited.

D. Account Use

For purposes of this document an account is defined as the unique security identification assigned to an individual student for secured access to specific College online systems, including classes offered through Internet, certain intranet applications and e-mail.

1. The College reserves the right to deny access to any college computer resource.
2. Users are responsible for maintaining the security of their assigned accounts and files. Users are not allowed to share their accounts. Passwords are to be changed every term and not revealed to others.
3. Users may not use an account to represent anyone other than themselves, nor use an account for which they do not have authority.
4. The College is under no obligation to recover or protect user files from deleted accounts.

By receiving a user ID and password, students are bound by the procedures, ethics and security needs of the College as stated in this document. Violations of these conditions, rules and security procedures can result in the revocation of the rights and privileges of the network, and potential disciplinary or legal action if warranted.

E. Software Copying and Distribution

1. Students are not allowed to add, remove or copy/download software from College-owned computers. Exceptions for class assignments must be arranged in advance with the class instructor or lab personnel.
2. College computer resources may not be used to make unauthorized copies of software.
3. Software provided by a textbook publisher may not be distributed in violation of that publisher's rules.

F. Incident Handling Procedure

Users are to take adequate precautions to prevent attempts to gain unauthorized access to computer systems. All suspected breaches of security or theft of computer resources must be reported to the instructor, who will notify Regional Computing Services and campus student affairs and instructional staff.

Violations

The College maintains jurisdiction over violations of any College rules, including those listed earlier and others which may be communicated to students. To protect students and Ivy Tech employees, violators shall be subject to disciplinary action by the College and, when possible, to prosecution by the appropriate law enforcement officials. Disciplinary actions against students thought to have violated Ivy Tech regulations shall follow the due process procedures which follow.

The following information provides students, faculty and staff with a set of guidelines to follow when College rules and regulations may be violated. Whenever possible, efforts should be made to solve conflicts or violations in an informal manner. All conflicts or violations need not result in formal hearings or proceedings.

Due Process

Students have the right of due process. Students are provided an opportunity to appeal any disciplinary decision and are required to sign a waiver if they choose to waive the right to appeal. In disciplinary cases, due process includes the following elements: entitlement to notice of charges, notice of possible penalty, and opportunity to present a defense to some authority.

Due Process Procedures

1. The student shall be notified by an appropriate College official that he or she is accused of violating a regulation.
2. The student shall be notified in writing that he or she may elect one of three courses of action:

    a. The student may admit the alleged violation and request in writing that the administrative officer take appropriate action. A signed waiver which waives the right to appeal is required.

    b. The student may admit the alleged violation and request a hearing before the Student Status Committee.

    c. The student may deny the alleged violation, which results in automatic referral to the Student Status Committee and a hearing by that body.

    Prior to the hearing, the student will be entitled to:

        i. Written notice of the time and place of the hearing, delivered at least 48 hours in advance.

ii. A written statement of the charges in sufficient detail to enable the student to prepare a defense.

iii. Written notification of the names of the witness(es) directly responsible for reporting the alleged violation, or if there are no such witness(es), written notification of how the alleged violation was reported.

3. The student shall be entitled to:

   a. Appear in person and present a defense to the Student Status Committee and call witnesses. If the student elects not to appear, the hearing shall be held in that person's absence.

   b. Be accompanied by counsel.

   c. Question the Student Status Committee and witnesses by directing questions through the chair of the committee.

   d. An expeditious hearing of the case.

   e. An explanation of any decision rendered.

Student Status Committee

A Student Status Committee is created to hear all cases related to the disciplinary status of students. Grievances of students as to their disciplinary status also may be heard by the Student Status Committee.

The committee will be composed of at least six members, including two full-time instructors and two administrative staff persons. The additional two members will be students designated by the Student Government or the campus Chief Administrative Officer or that officer's designee. The committee's review and subsequent disposition of formal complaint will begin no later than 30 days after receipt of a written complaint. The Student Status Committee shall keep a record of its actions on all complaints and file a copy in a student's academic file upon resolution of each case.

A student has the following rights:

1. Notice of actions and meetings at all stages of the formal complaint procedure.
2. An opportunity to be heard.
3. An opportunity to question witnesses at hearings.
4. An opportunity to have a representative present when presenting facts, being questioned or asking questions.

The campus Chief Administrative Officer reviews the committee's recommendations and confirms or modifies them. This officer's decision is final.

Disciplinary Action

A student who violates College rules and regulations is subject to any of the following disciplinary actions:

1. Verbal reprimand;
2. Restitution of damages;

3. Restriction of privileges;

4. Withdrawal from a course, program or the College;

5. Suspension from the College;

6. Dismissal from the College.

Instructors, through the Chief Academic Officer, or other administrators, through the Director of Student Affairs, may recommend to the Student Status Committee that a student be withdrawn from a course, program or the College for disciplinary reasons. Students recommended for dismissal will be notified by their advisors and will be given an opportunity to be heard by the Student Status Committee before such action is final. Disciplinary dismissals from the College will be final only after review by the Student Status Committee and the Chief Administrative Officer of the campus. Students dismissed for disciplinary reasons are not entitled to refunds.

Student Grievance Policy

1. The student should bring a complaint to the attention of that person's advisor. If the complaint is based upon perceived discrimination (race, creed, color, age, religion, sex, disability or sexual harassment), the student may bring the complaint to the campus Affirmative Action Officer.

2. The advisor or instructor schedules a conference within 10 instructional days after receiving a notice of complaint.

3. A student who feels that a conference would be futile because of an advisor's involvement may request a conference with a department head, division chair or the Dean/Director of Instructional Affairs, as appropriate. This conference also will be held within 10 instructional days of the notice of the complaint.

4. If the complaint is not resolved to the student's satisfaction through this informal procedure, that person may submit the grievance in writing to the Chief Administrative Officer.

5. The formal complaint brought by a student must:

    a. Clearly state the facts giving rise to the grievance.

    b. State the remedy sought by the complaining party.

    c. Be signed and dated.

6. The Student Status Committee is responsible for review and disposition of any complaint it receives.

7. Formal grievance procedures may result in one of five dispositions. They are:

    a. Deny further action. If the grievant cannot make a prima facie case, the matter will be dismissed and the grievant will be given the reason in writing. The grievant may resubmit a complaint once within 30 days providing additional information is submitted. If not, the decision is final.

    b. Fact-finding and mediation. The committee on its own may investigate the allegation and attempt to mediate a mutually agreeable resolution with the parties. A signed agreement summarizing the issue and resolution should be generated if agreement is reached.

    c. Referral. The complaint may be referred to a more appropriate forum for action.

        1. A complaint involving discrimination should be referred to the Affirmative Action Officer to be initially processed under the College affirmative action plan. If a hearing is necessary, the Affirmative Action Officer may return the matter with advice to the Student Status Committee for a formal hearing.

        2. If the committee believes a policy or procedure of the College is being

legitimately challenged, it will refer the grievance to the Chief Administrative Officer of the campus with an explanation of its concern.

d. Remand complaint. If it appears that there has been no legitimate informal attempt to resolve the matter and the committee feels that such discussion might lead to resolution of the complaint, the matter may be referred to the student advisor or other appropriate staff person for review and discussion with the student. If resolved, a report to the Student Status Committee will be made by the staff person. The Student Status Committee will review the agreement reached with the student to assure that there was mutual agreement and understanding.

e. Hold formal hearing. If a grievance cannot be resolved using the steps listed above, the committee may hold a formal hearing. At such a hearing, witnesses may be called, including the parties to the complaint. A recommendation then will be formulated and a report made to the campus Chief Administrative Officer.

Reinstatement

If a student is dismissed from any site, campus or region of Ivy Tech, that individual is dismissed from the College. After one calendar year, the individual may apply for reinstatement by informing the Director of Student Affairs at the site/region where the dismissal took place of intent to begin the reinstatement process. Application for reinstatement may be made at the Ivy Tech campus the individual hopes to attend. The Student Status Committee will act on the appeal within 30 days of its receipt. The recommendation of the Student Status Committee will be forwarded to the Chief Executive Officer of the site, campus or region, who will render a judgment on the appeal. That judgment will be final.

Student Right to Know

The 1990 federal Student Right to Know Act requires colleges and universities to report to prospective and current students the persistence and graduation rates of full-time technical certificate and degree-seeking students. The graduation rate is based upon program completion within 150 percent of time usually required for a full-time student. For technical certificate students, this is the number of full-time students graduating in three semesters. For associate degree students, this is the number graduating in six semesters. Contact the Office of Student Affairs for further information.

CAMPUS SECURITY INFORMATION

To Report a Crime

Ivy Tech is required by federal law to report the frequency of criminal activity occurring on its campuses to current and prospective students, faculty, staff and parents upon request. Any student, prospective student, faculty or staff person who has been a victim of or a witness to a criminal activity which occurred on any of the facilities or grounds of any Ivy Tech campus is encouraged to report this act to campus security or to the Office of Student Affairs.

Hours of Operation

The normal hours of operation are posted at each Ivy Tech campus.

Security

Each Ivy Tech campus designates employees who are responsible for addressing security-related matters, and to whom criminal activity should be reported. If security staff members are not available, the activity should be reported to the Office of Student Affairs. The local police department also should be notified of any crime. It is College policy to assist the police in any investigation.

Prompt and Accurate Reporting

All criminal activity should be reported accurately to Ivy Tech personnel and local police. Misrepresenting criminal activity or falsely reporting an incident could result in prosecution or College disciplinary action.

Responsibility

Ivy Tech campuses have low occurrences of criminal activity. However, safety precautions should be observed at all times. The College encourages all students, prospective students, faculty and staff to take the responsibility to help each other in situations where criminal activity occurs.

Crime Prevention Program

Ivy Tech is not a residential college. Students are encouraged to follow the same safety and precautionary measures they follow in their homes and in the community. The Office of Student Affairs will assist anyone interested in attending a seminar or program on crime prevention.

Off-Campus Housing

There is no off-campus housing endorsed by Ivy Tech.

Alcohol Violation

Under Indiana law, consuming, being under the influence of, or possessing intoxicating beverages on College property is not permitted. Students, staff or visitors in violation of this law face College disciplinary action.

Drug Violation

Under Indiana law, being under the influence of, use of, possession of, or distribution of illegal drugs are not permitted. Local law enforcement authorities will be notified when instances occur.

Substance Abuse Counseling

The College refers students in need of special help with substance abuse problems to appropriate counseling agencies in the community.

Incident Reports

A copy of each incident report is forwarded to the staff member designated to handle campus security-related issues. The Director of Student Affairs also is supplied with a copy.

Annual Report

A copy of the annual report is available from the Office of Student Affairs.

INSTRUCTIONAL PROGRAMS

In keeping with its mission and goals, the College serves persons with educational programs consistent with projected job and educational requirements and personal interests. Ivy Tech programs complement secondary programs, four-year programs and adult basic education programs. The purposes of Ivy Tech's programs are to develop competent workers for initial employment, upgrade the skills of those already employed and provide a foundation for further education at a baccalaureate institution.

Ivy Tech programs are designed to meet the needs of students, accommodating those who wish to enroll in a few classes or a full degree program. A few classes in a planned sequence may comprise a career development certificate. Credit programs culminate in an associate of applied science degree, an associate of science degree, or a technical certificate.

The College's degree programs are offered in five divisions:

- Business Division
- Health and Human Services Division
- Technology Division
- Visual Technologies Division
- General Education and Support Services Division

Associate of Applied Science (AAS) Degree Programs

Associate of applied science degree programs prepare students for careers, career changes and career advancement. AAS programs may also prepare students for transfer to four-year institutions. These programs offer education in recognized technical areas and specialties with emphasis on analysis, synthesis and evaluation. The program content, which is approximately 30 percent general education, provides depth and breadth in conceptual and technical skills. The general education courses equip students with the problem solving, communications, scientific and mathematical skills to compete successfully in the job market. Technical courses equip students with the technical skills to obtain employment and to advance in the workforce.

Associate of Science (AS) Degree Programs

Associate of science degree programs prepare students for transfer to cooperating four-year institutions and for careers. AS programs contain 40 percent or more general education, with the balance in technical courses. The general education and technical courses provide students with a foundation for transfer to a four-year institution and eventual completion of a baccalaureate

degree, and equip students with skills for the job market. AS curricula can be tailored to meet students' specific transfer objectives. Students should contact their local Ivy Tech campus for information about AS transfer programs.

Technical Certificate (TC) Programs

Technical Certificate programs provide education in conceptual and technical skills for specific occupations. Each program contains a sequence of required courses in a recognized specialty within one of the programs at the College. The program content is designed to develop competency in the comprehension of general and technical skills.

Career Development Certificates (CDC)

Ivy Tech provides short-term programs for individuals who desire to develop competencies in a specific area. These programs are less than 30 semester credits in length. Instruction is delivered through methods that include regular courses and specifically designed courses. Many of these courses are based on a sequence of learning experiences determined by a certifying state or national association or organization. Completion of certain short-term programs qualifies students to sit for certification examinations. The number and type of short-term programs vary among the Ivy Tech campuses.

Business and Industry Training Programs

Ivy Tech offers specialized training services for business and industry. Directors of business and industry training develop custom-designed programs and services to meet the training needs of local businesses. Through its training offices, Ivy Tech consults, designs, produces, conducts and evaluates training specifically designed to satisfy employer needs on a one-time or on-going basis. The directors work with business and industry, trade unions and community economic development groups to assess training needs and to deliver training when and where it is needed, often in-plant.

The services provided by the business and industry training programs help ensure that the skills of employees of Indiana firms are current with changing technology. Instruction that best meets a company's specific needs is delivered through methods that might include regular courses, short-term courses, seminars, conferences and labs.

With more than 30 years of experience in technical instruction, Ivy Tech has been and continues to be a leader in promoting Indiana's economic development by providing comprehensive training services to Indiana businesses and industries. Detailed information is available from the directors of business and industry training at Ivy Tech campuses.

Indiana Partnership for Statewide Education (IPSE)

The Indiana Partnership for Statewide Education is a collaboration of Indiana's colleges and universities committed to delivering higher education courses via distance education to all learners throughout the state. Some IPSE courses are offered via the Indiana Higher Education Telecommunications System (IHETS). Classes are delivered via satellite from college and university campuses to learning centers located throughout Indiana, many on Ivy Tech campuses. Other courses are delivered directly into student homes via cable television, public broadcasting, video tapes or computers. Most courses offered through the partnership are transferable among all seven of Indiana's public colleges and universities, as well as several private colleges and universities. Contact the Director of Student Affairs for availability of courses.

General Technical Studies Program

The General Technical Studies Program provides an option for students who may not be ready to enter a degree program. As such, the program serves primarily as a beginning point for students as they define and meet their educational objectives. It is designed to meet the diverse needs of the students Ivy Tech serves. The program will:

- Provide an opportunity for students to correct skill deficiencies before enrolling in a technical degree program.
- Provide a program for students who have not selected a specific educational or career goal by the time they have entered the College.
- Allow students who are waiting for admission into a selective program to enter the College.
- Provide a directed program of career-oriented educational exploration to encourage an examination of occupational program areas.
- Increase student retention by providing a vehicle which promotes informed choices.
- Provide undecided students the opportunity to pursue coursework which will serve as a foundation for related one- or two-year programs while engaged in career exploration.
- Provide an opportunity for a student to pursue a one-year program of general technical studies.

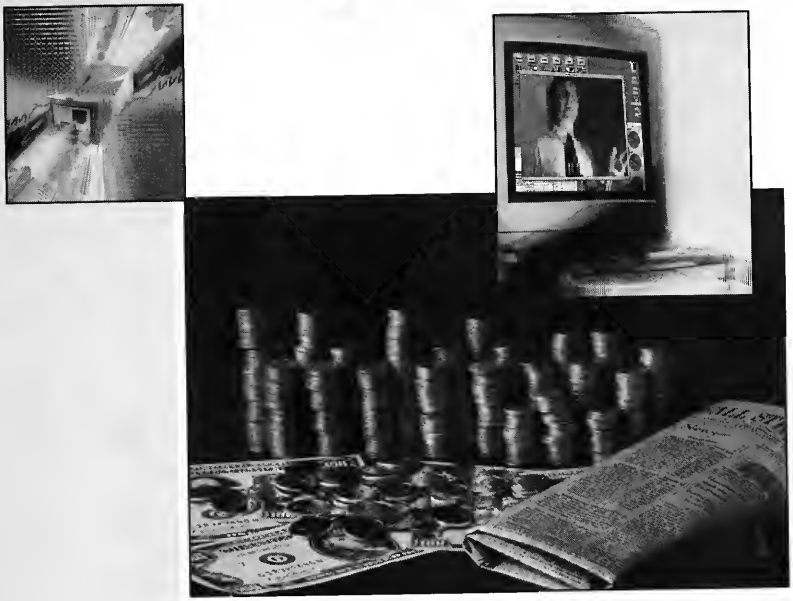
The General Technical Studies Program is offered through the General Education and Support Services Division and is available at each of Ivy Tech's 22 campuses. Interested students should contact their local campus to see a description of the degree requirements.

Apprenticeship Technology

In 1993, Ivy Tech's State Board of Trustees, the Indiana Commission for Vocational and Technical Education, and the Commission for Higher Education approved joint educational programs between the College and local joint apprenticeship committees in the building trades.

Individuals who participate in the program become Ivy Tech students and have the opportunity to earn credit while moving through the program. The apprentice has the opportunity to earn a technical certificate or associate of applied science degree. The degree depends upon the local Joint Apprenticeship Training Committee agreement with the College. Credit is given for on-the-job work experience in accordance with guidelines commonly accepted by institutions of higher education. Distribution of apprenticeship degree programs varies by site.

Ivy Tech also provides a number of industrial apprenticeship curricula, some of which can culminate in the awarding of a certificate or degree.



Business

The Business Division provides career and transfer education for individuals seeking employment or further education and for those who are currently employed in business and business-related fields. Programs lead to an associate of applied science degree, an associate of science degree or a technical certificate. Opportunities to transfer credits to four-year colleges are available through associate of science degrees or through transfer of credit for selected individual courses. The Business Division also offers courses to students who are not seeking a degree, but desire specialized post-secondary education.

Career opportunities in business and office environments are expanding rapidly for those who have the technical skills to meet the demands. Programs offered through the Business Division provide education that meets the needs of Indiana employers.

Accounting

Program Description

The Accounting program develops an understanding of accounting principles, business law, communications, business equipment and related areas of study in the field. Instruction is offered in computerized accounting systems. Technical skills in financial accounting, cost accounting and tax preparation are emphasized.

Accounting duties typically include maintaining journals and ledgers, processing banking transactions, billing, preparing payroll, maintaining inventory records, purchasing, processing expense reports, preparing financial statements and analyzing managerial reports. Position titles may include junior or staff accountant, junior auditor, cost accounting clerk, bookkeeper, payroll clerk, inventory clerk, accounts receivable clerk and financial management trainee.

A two-year program requiring 60 credits leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The Accounting program is offered in Gary, Valparaiso, East Chicago, South Bend, Warsaw, Elkhart, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Anderson, Marion, Terre Haute, Indianapolis, Richmond, Columbus, Bloomington, Lawrenceburg, Madison, Evansville and Sellersburg. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Accounting program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (60 Credits)*
- *Technical Certificate (30 Credits)*

Specialties Offered:

None

Program Available at:

Anderson
Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Lawrenceburg
Logansport
Madison
Marion
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Accounting

Associate of Applied Science

To earn this degree, you must have 60 credits in the following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	12

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	*ECN XXX	Economics Elective	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	*	Life/Physical Sciences Elective	3
	*	Humanities/Social Sciences Elective	3
Technical	ACC 101	Accounting Principles I	3
	ACC 102	Accounting Principles II	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	CIS 101	Introduction to Microcomputers	3
	OAD 218	Spreadsheets	3
Other Required Courses (24 credits)	ACC 105	Income Tax I	3
	ACC 201	Intermediate Accounting I	3
	ACC 203	Cost Accounting I	3
	^ACC 225	Integrated Accounting Software	3
		Locally Determined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Accounting

Technical Certificate

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	**COM 102	Introduction to Interpersonal Communication	3
		OR	
	**ENG 111	English Composition	3
	*	Humanities/Social Sciences Elective	3
Technical	CIS 101	Introduction to Microcomputers	3
Other Required Courses (21 Credits)	ACC 101	Accounting Principles I	3
	ACC 102	Accounting Principles II	3
		Locally Determined Courses	15

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Business Administration

Program Description

The Business Administration program gives students the broad background they need for general administrative positions in a variety of business environments. It also provides an opportunity for specialization in one of the following areas: banking and financial management, casino management, health care management, logistics management, management, marketing, operations management, quality management, and restaurant management.

A two-year program requiring 60-66 credits leads to an associate of applied science degree. Business Administration students wishing to pursue a bachelor of science in Business Administration, or other business baccalaureate programs, at Indiana State University or Ball State University, and enter as a junior-year student may complete an associate of science degree program in Business Administration. Students should choose the appropriate associate of science curriculum for the university they plan to attend. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU or Ball State. Technical certificates and career development certificates also are available. The Business Administration program is offered in Gary, Valparaiso, Warsaw, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Anderson, Marion, Terre Haute, Indianapolis, Richmond, Bloomington, Columbus, Madison, Evansville and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Business Administration program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (60-66 Credits)*
- *Associate of Science (63 Credits; ISU Transfer)*
- *Associate of Science (66 Credits; BSU transfer)*
- *Technical Certificate (30 Credits)*

Specialties Offered:

- *Banking and Financial Management*
- *Casino Management*
- *Health Care Management*
- *Logistics Management*
- *Management*
- *Marketing*
- *Operations Management*
- *Quality Management*
- *Restaurant Management*

Program Available at:

Anderson
Bloomington
Columbus
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Madison
Marion
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Business Administration

Associate of Applied Science

To earn this degree, you must have 60-66 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-19
Locally Determined Courses	11-13

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	*ECN	Economics Elective	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	*	Humanities/Social Sciences Elective	3
	*	Life/Physical Sciences Elective	3
Technical			
	ACC 101	Accounting Principles I	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	BUS 105	Principles of Management	3
	CIS 101	Introduction to Microcomputers	3
	MKT 101	Principles of Marketing	3
Choose One of the Following Specialties			
Banking & Financial Management Specialty (24 credits)	BNK 215	Principles of Banking	3
	BNK 218	Consumer Lending	3
	^BNK 219	Bank Management	3
	BNK 220	Trust Operations	3
		Locally Determined Courses	12
Casino Management Specialty (30 Credits)	^BUS 204	Case Problems in Management	3
	HOS 132	Techniques of Casino Games: Blackjack	6
	HOS 141	Introduction to Casino Operations	3
	HOS 231	Techniques of Casino Games: Craps-Subsequent	7
		Locally Determined Courses	11

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Business Administration

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
Health Care Management Specialty (24 Credits)	BUS 202	Human Resource Management	3
	HLT 125	Health Care Systems and Trends	3
	HLT 225	Finance and Budgeting for Health Care	3
	^HLT 226	Organizational Development in Health Care	3
		Locally Determined Courses	12
Logistics Management Specialty (24 credits)	LOG 101	Introduction to Materials Management	3
	LOG 201	Transportation Systems	3
	LOG 202	Physical Distribution	3
	^MKT 202	Logistics/Purchasing Control	3
		Locally Determined Courses	12
Management Specialty (24 Credits)	BUS 202	Human Resource Management	3
	BUS 203	Business Development	3
	^BUS 204	Case Problems in Management	3
	BUS 210	Managerial Finance	3
		Locally Determined Courses	12
Marketing Specialty (24 Credits)	MKT 102	Principles of Selling	3
	MKT 104	Promotions Management	3
	MKT 201	Introduction to Market Research	3
	^MKT 220	Principles of Retailing	3
		Locally Determined Courses	12
Operations Management Specialty (24 credits)	BUS 202	Human Resources Management	3
	QSC 204	Total Quality Management	3
	OPM 102	Techniques of Supervision I	3
	^OPM 224	Operations Management	3
		Locally Determined Courses	12
Quality Management Specialty (24 Credits)	QSC 101	Quality Control Concepts and Techniques I	3
	QSC 102	Statistical Process Control	3
	QSC 202	Quality Control Concepts and Techniques II	3
	^QSC 204	Total Quality Management	3
		Locally Determined Courses	12
Restaurant Management Specialty (25 Credits)	HOS 101	Sanitation and First Aid	3
	HOS 108	Table Service	3
	HOS 201	Hospitality Organization and Human Resources Management	3
	^HRM 204	Food and Beverage Management	3
		Locally Determined Courses	13

Business Administration

Associate of Science

To earn this degree, you must have 63 credits in the following areas:

General Education Core	36
Technical Core	27
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Business Administration program

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
	*	Life/Physical Sciences Elective	3
	*	Life/Physical Sciences, Math Elective	3
	*	Humanities Electives	9
	*	Social Sciences Electives	9
Technical	ACC 101	Accounting Principles I	3
	ACC 102	Accounting Principles II	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	BUS 110	Business Statistics	3
	CIS 101	Introduction to Microcomputers	3
	CIS 102	Information Systems Fundamentals	3
	ECN 201	Principles of Macroeconomics	3
	ECN 202	Principles of Microeconomics	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Business Administration

Associate of Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	36
Technical Core	30
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Ball State University's College of Business, Business Administration program.

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 112	Exposition and Persuasion	3
	BIO 101	Introductory Biology	3
	PSY 101	Introduction to Psychology	3
	SOC 111	Introduction to Sociology	3
	PHL 101	Introduction to Philosophy	3
	POL 101	Introduction to American Government and Politics	3
	HSY 101	Survey of American History I	3
	HSY 102	Survey of American History II	3
	MAT 111	Intermediate Algebra	3
	MAT 135	Finite Math	3
Technical	ACC 101	Accounting Principles I	3
	ACC 102	Accounting Principles II	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	BUS 110	Business Statistics	3
	CIS 101	Introduction to Microcomputers	3
	CIS 102	Information Systems Fundamentals	3
	ECN 201	Principles of Macroeconomics	3
	ECN 202	Principles of Microeconomics	3
	MAT 210	Brief Calculus	3

Business Administration

Technical Certificate

To earn this degree, you must have 30-33 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6-18
Locally Determined Courses	6-18

You Must Have	Required Courses		Credit Hours
General Education	**ENG 111	English Composition	3
		OR	
	**COM 101	Fundamentals of Public Speaking	3
	** MAT 112	Functional Mathematics	3
		OR	
	** MAT 111	Intermediate Algebra	3
Technical	BUS 101	Introduction to Business	3
Choose One Specialty			
Banking & Financial Management Specialty (21 credits)	ACC 101	Accounting Principles I	3
	BNK 215	Principles of Banking	3
	BNK 218	Consumer Lending	3
		Locally Determined Courses	12
Casino Management Specialty (24 Credits)	HOS 131	Techniques of Casino Games: Craps	9
	HOS 132	Techniques of Casino Games: Blackjack	6
	HOS 141	Introduction to Casino Operations	3
		Locally Determined Courses	6
Health Care Management Specialty (24 Credits)	BUS 202	Human Resources Management	3
	HLT 125	Health Care Systems and Trends	3
		Locally Determined Courses	18
Management Specialty (21 credits)	CIS 101	Introduction to Microcomputers	3
	BUS 105	Principles of Management	3
		Locally Determined Courses	15
Marketing Specialty (21 Credits)	CIS 101	Introduction to Microcomputers	3
	MKT 101	Principles of Marketing	3
		Locally Determined Courses	15
Operations Management Specialty (21 Credits)	CIS 101	Introduction to Microcomputers	3
	OPM 102	Techniques of Supervision I	3
		Locally Determined Courses	15
Quality Management Specialty (21 Credits)	CIS 101	Introduction to Microcomputers	3
	QSC 101	Quality Control Concepts and Techniques I	3
		Locally Determined Courses	15

Computer Information Systems

Program Description

The Computer Information Systems curriculum, with specialties in management information systems, network, PC support and administration, and programmer/analyst, is designed to provide flexible and comprehensive education. The curriculum includes technical courses in computer information systems and related areas, general education and locally determined technical courses in each specialty area. Instruction includes both theoretical concepts and practical applications needed to produce graduates able to function in positions of responsibility.

Automated systems allow for the integration of several functionally related applications such as word processing, database management, spreadsheets, programming, electronic mail systems, graphics generation and telecommunications. These systems may be stand-alone, shared logic, distributed or integrated. Demand for employees with computer and business skills is particularly high in small- and medium-sized firms which create, transmit and control information by using computer technology as a management tool.

A two-year program requiring 60 credit hours leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The Computer Information Systems Program is offered in Gary, Valparaiso, East Chicago, South Bend, Warsaw, Elkhart, Fort Wayne, Lafayette, Kokomo, Wabash, Logansport, Muncie, Anderson, Terre Haute, Indianapolis, Richmond, Columbus, Bloomington, Madison, Lawrenceburg, Evansville and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Computer Information Systems program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (60 Credits)*
- *Technical Certificate (30 Credits)*

Specialties Offered:

- *Management Information Systems*
- *Network (Novell)*
- *Network (Windows NT)*
- *Network (Multi-Vendor)*
- *PC Support & Administration*
- *Programmer/Analyst*

Program Available at:

Anderson
Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Lawrenceburg
Logansport
Madison
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso
Warsaw
Wabash

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Computer Information Systems

Associate of Applied Science

To earn this degree, you must have 60 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12
Locally Determined Courses	12

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	*ECN	Economics Elective	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	*	Humanities/Social Sciences Elective	3
	*	Life/Physical Sciences Elective	3
Technical	ACC 101	Accounting Principles I	3
	BUS 101	Introduction to Business	3
	CIS 101	Introduction to Microcomputers	3
	CIS 102	Information Systems Fundamentals	3
	CIS 106	Microcomputer Operating Systems	3
	^CIS 203	Systems Analysis and Design	3
Choose One of the Following Specialties			
Management Information Systems Specialty (24 credits)	CIS 114	Principles of Management Information Systems	3
	CIS 201	Database Design and Management	3
	CIS 206	Project Development with High Level Tools	3
	CIS 227	Topics in Information Management	3
		Locally Determined Courses	12
Network/Novell Specialty (24 Credits)	CIS 202	Data Communications	3
	CIS 243	Novell Network Administration I	3
	CIS 244	Novell Network Administration II	3
	CIS 246	Novell Network Hardware Service and Support	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Computer Information Systems

Associate of Applied Science—Specialties

	Required Courses		Credit Hours
ETWORK/WINDOWS NT SPECIALTY (24 CREDITS)	CIS 202	Data Communications	3
	CIS 263	Windows NT Network Administration I	3
	CIS 264	Windows NT Network Administration II	3
	CIS 266	Windows NT Network Hardware Service and Support	3
		Locally Determined Courses	12
ETWORK/MULTI-VENDOR SPECIALTY (24 CREDITS)	CIS 202	Data Communications	3
	CIS 255	Network Operating Systems	3
	CIS 258	Network Communication and Connectivity	3
	CIS 273	Network Administration	3
		Locally Determined Courses	12
PC SUPPORT AND DMINISTRATION SPECIALTY (24 CREDITS)	CIS 202	Data Communications	3
	CIS 224	Hardware and Software Troubleshooting	3
	CIS 251	Advanced Operating Systems	3
	CIS 252	Internet/WWW Site Development	3
		Locally Determined Courses	12
PROGRAMMER/ANALYST SPECIALTY (24 CREDITS)	CIS 113	Logic, Design, and Programming	3
	CIS 120	Programming I	3
	CIS 201	Database Design and Management	3
	CIS 217	Programming II	3
		Locally Determined Courses	12

Computer Information Systems

Technical Certificate

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Other Required Courses	6
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	**COM 102	Introduction to Interpersonal Communication	3
		OR	
	**ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
Technical	CIS 101	Introduction to Microcomputers	3
Other Required Courses (21 Credits)	CIS 102	Information Systems Fundamentals	3
	CIS 106	Microcomputer Operating Systems	3
		Locally Determined Courses	15

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Hospitality Administration

Program Description

The Hospitality Administration program emphasizes the techniques of such hospitality leaders as Ritz, Escoffier, Statler, Hilton and Marriott. By choosing a specialty area, students begin building leadership skills for the profession of welcoming and serving guests. The hospitality programs offered by Ivy Tech produce graduates who can perform well in the hospitality industry.

Specialties are available in baking and pastry arts, culinary arts, food service (technical certificate only), hotel and restaurant management, and casino management. A two-year program requiring 64-66 credits leads to an associate of applied science degree. Technical certificates and career development certificates are also available. The Hospitality Administration program is offered in Gary, East Chicago, Fort Wayne, and Indianapolis. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Hospitality Administration program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (64-66 Credits)*
- *Technical Certificate (30-33 Credits)*

Specialties Offered:

- *Baking & Pastry Arts*
- *Casino Management*
- *Culinary Arts*
- *Hotel & Restaurant Management*
- *Food Service (TC only)*

Program Available at:

East Chicago
Fort Wayne
Gary
Indianapolis

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Hospitality Administration

Associate of Applied Science

To earn this degree, you must have 64-66 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	19-30
Locally Determined Courses	0-11

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	*ECN	Economics Elective	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	*	Humanities/Social Sciences Elective	3
	*	Life/Physical Sciences Elective	3
Technical	HOS 101	Sanitation and First Aid	3
	HOS 102	Basic Foods Theory and Skills	3
	HOS 104	Nutrition	3
	HOS 109	Hospitality Purchasing	2
	HOS 201	Hospitality Organization and Human Resource Management	3
	HOS 203	Menu, Design, and Layout	2
	HOS 204	Food and Beverage Cost Control	2
Choose One of the Following Specialties			
Baking & Pastry Arts Specialty (30 credits)	BKR 101	Yeast Breads I	3
	BKR 102	Yeast Breads II	3
	BKR 103	Merchandising	3
	BKR 104	Baking Science	3
	BKR 201	Cakes, Icings, and Fillings	3
	BKR 202	Advanced Decorating/Candies	3
	HOS 105	Introduction to Baking	3
	HOS 106	Pantry and Breakfast	3
	HOS 207	Advanced Baking and Chocolates	3
	^HOS 280	Co-op/Internship/Externship/Practicum	3

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Hospitality Administration

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
Casino Management Specialty (30 Credits)	^BUS 204	Case Problems in Management	3
	HOS 132	Techniques of Casino Games: Blackjack	6
	HOS 141	Introduction to Casino Operations	3
	HOS 231	Techniques of Casino Games: Craps-Subsequent	7
		Locally Determined Courses	11
ulinary Arts Specialty (30 Credits)	CUL 110	Meat Cutting	2
	CUL 211	Classical Cuisines	3
	CUL 212	Fish and Seafood	2
	HOS 103	Soups, Stocks, and Sauces	2
	HOS 105	Introduction to Baking	3
	HOS 106	Pantry and Breakfast	3
	HOS 108	Table Service	3
	HOS 202	Garde Manger	3
	^HOS 280	Co-op/Internship/Externship/Practicum	3
		Locally Determined Courses	6
Hotel & Restaurant Management Specialty (28 Credits)	ACC 101	Accounting Principles I	3
	CIS 101	Introduction to Microcomputers	3
	BUS 101	Introduction to Business	3
	BUS 102	Business Law	3
	BUS 105	Principles of Management	3
	HOS 108	Table Service	3
	HOS 205	Food and Beverage Cost Control Applications	1
	^HOS 280	Co-op/Internship/Externship/Practicum	3
	HRM 202	Front Office	3
	HRM 206	Housekeeping	3

Hospitality Administration

Technical Certificate—Casino Management

To earn this degree, you must have 33 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	15
Locally Determined Courses	9

You Must Have		Required Courses	Credit Hours
General Education	**ENG 111	English Composition	3
		OR	
	**COM 102	Introduction to Interpersonal Communication	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
Technical	HOS 101	Sanitation and First Aid	3
Specialty (24 Credits)	HOS 132	Techniques of Casino Games: Blackjack	6
	HOS 141	Introduction to Casino Operations	3
	HOS 231	Techniques of Casino Games: Craps-Subsequent	6
		Locally Determined Courses	9

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Hospitality Administration

Technical Certificate—Food Service

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	**ENG 111	English Composition	3
		OR	
	**COM 101	Fundamentals of Public Speaking	3
	SOC 111	Introduction to Sociology	3
Technical	HOS 101	Sanitation and First Aid	3
Specialty (21 Credits)	HOS 102	Basic Foods Theory and Skills	3
	HOS 104	Nutrition	3
		Locally Determined Courses	15

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Office Administration

Program Description

The Office Administration program prepares students for an automated office environment. Students develop basic office skills and acquire computer skills including word processing, spreadsheets, databases, and microcomputer operating systems. Several applications (advanced word processing, desktop publishing and integrated packages) also can be studied in depth.

The Office Administration program is designed to accommodate students with different levels of training and experience. Courses are offered which provide initial, advanced and refresher education, and assist individuals in achieving professional recognition and career progression. The program prepares graduates as administrative office personnel and provides opportunities for specialized training in such areas as administrative, legal, medical, and software applications. Students who complete the recommended sequence of courses are eligible to take the Administrative/Information Processing Specialist (AIPS) or the Certified Professional Secretary (CPS) exams administered by the Institute for Certifying Secretaries of the Professional Secretaries International Association (PSI).

A two-year program requiring 60 credit hours leads to an associate of applied science degree. Technical certificates and career development certificates also are available. An associate of science degree is available at selected campuses. The Office Administration program is offered in Gary, Valparaiso, East Chicago, South Bend, Warsaw, Elkhart, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Anderson, Marion, Terre Haute, Indianapolis, Richmond, Columbus, Bloomington, Madison, Lawrenceburg, Evansville, Tell City, and Sellersburg. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Office Administration program participate in evaluations of proficiency in general and technical education.

Degrees Available

- *Associate of Applied Science (60 Credits)*
- *Technical Certificate (30 Credits)*

Specialties Offered

- *Administrative*
- *Legal*
- *Medical*
- *Software Applications*

Program Available at:

Anderson
Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Lawrenceburg
Logansport
Madison
Marion
Muncie
Richmond
Sellersburg
South Bend
Tell City
Terre Haute
Valparaiso
Warsaw

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page for contact information

Office Administration

Associate of Applied Science

To earn this degree, you must have 60 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	9-12

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	*ECN	Economics Elective	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	*	Life/Physical Sciences Elective	3
	*	Social Sciences Elective	3
Technical	ACC 101	Accounting Principles I	3
	BUS 101	Introduction to Business	3
	CIS 101	Introduction to Microcomputers	3
	OAD 119	Document Processing	3
	OAD 216	Business Communications	3
	^OAD 221	Office Administration and Supervision	3
Choose One Specialty			
Administrative Specialty (24 credits)	OAD 103	Word Processing Applications I	3
	OAD 114	Desktop Publishing	3
	OAD 121	Office Procedures	3
	OAD 220	Records and Database Management	3
		Locally Determined Courses	12
Legal Specialty (24 Credits)	OAD 103	Word Processing Applications I	3
	LEG 101	Introduction to Paralegal Studies	3
	LEG 102	Legal Research and Writing	3
	LEG 103	Civil Procedures	3
		Locally Determined Courses	12
Medical Specialty (24 Credits)	HHS 101	Medical Terminology	3
	HHS 102	Medical Law and Ethics	2
	MEA 115	Medical Insurance	2
	MEA 132	Computer Concepts for the Medical Office	2
	OAD 121	Office Procedures	3
		Locally Determined Courses	12
Software Applications Specialty (24 Credits)	OAD 103	Word Processing Applications I	3
	OAD 114	Desktop Publishing	3
	OAD 214	Multimedia Design	3
	OAD 217	Problem Solving for Computer Users	3
	OAD 218	Spreadsheets	3
		Locally Determined Courses	9

Office Administration

Technical Certificate

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	9
Locally Determined Courses	12

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	*	Social Sciences Elective	3
Technical	OAD 119	Document Processing	3
Other Required Courses (21 Credits)	CIS 101	Introduction to Microcomputers	3
	OAD 103	Word Processing Applications	3
	OAD 121	Office Procedures	3
		Locally Determined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Paralegal

Program Description

Recognizing the demand for trained paralegals, Ivy Tech has shaped a curriculum with input from attorneys and other professionals associated with the legal field. These advisors offer Ivy Tech the opportunity to establish the qualifications necessary for success in the paralegal field.

The duties of trained paralegals can range from research and writing to interviewing and investigations. As examples, paralegals can be found performing legal research, drafting legal correspondence and legal pleadings, interviewing clients and witnesses, or managing trial documents and exhibits.

An Ivy Tech education provides students with the wide variety of skills necessary to succeed in this career. The curriculum emphasizes written and oral communication skills and provides in-class opportunities for technical skill development. Courses are taught by attorneys who are selected based upon their experience in the subject matter, as well as their familiarity with the function of paralegals as part of the legal team.

A two-year program requiring 60 credits leads to an associate of applied science degree. The Paralegal program is offered in Indianapolis and Fort Wayne. Students graduating from the Paralegal program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (60 Credits)*

Specialties Offered:

None

Program Available at:

Fort Wayne
Indianapolis

Paralegal

Associate of Applied Science

To earn this degree, you must have 60 credits in the following areas:

General Education Core	24
Technical Core	21
Specialty Core	N/A
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	**ANP 101	Anatomy and Physiology I	3
		OR	
	**BIO 101	Introductory Biology	3
		OR	
	**SCI 111	Physical Science	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 112	Exposition and Persuasion	3
	MAT 111	Intermediate Algebra	3
	PHL 102	Introduction to Ethics	3
	*	Humanities/Social Sciences Elective	3
	*	Humanities/Social Sciences Elective	3
Technical	**ACC 101	Accounting Principles I	3
		OR	
	**CIS 101	Introduction to Microcomputers	3
	LEG 101	Introduction to Paralegal Studies	3
	LEG 102	Legal Research and Writing	3
	LEG 103	Civil Procedures	3
	LEG 106	Torts and Claims Investigation	3
	LEG 202	Advanced Trial Procedures	3
	^LEG 204	Advanced Legal Writing	3
		Locally Determined Courses	15

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Health and Human Services

The Division of Health and Human Services prepares students to become technical members of the health care team. Classroom, laboratory and clinical experiences prepare students for service in hospitals, laboratories, nursing homes, child-care facilities, physicians' offices and other service related settings.

College health and human services programs are recognized and accredited by appropriate external accrediting agencies. Students should contact the local Ivy Tech campus for information concerning programs and course offerings.

A.S. in Nursing

Program Description

The Associate of Science in Nursing (ASN) Program is designed to accommodate two groups of students: Those who are entering a nursing program for the first time and those licensed practical nurses seeking educational mobility to the associate-degree level. For first-time nursing students, the curriculum listed on the next page is completed. LPN's admitted to the ASN program who complete NUR 249 with a grade of "C" or better will receive advanced credit and begin the nursing sequence of courses with the 200 level of coursework. Completion of NUR 249, coupled with the LPN education and experience, brings the LPN to the same level as the generic ASN student upon entering the second year of study in the program.

Graduates of the ASN program are eligible to take the NCLEX-RN examination to become registered nurses. Graduates may seek immediate employment as nurses or choose to transfer their credits to a four-year institution offering a baccalaureate degree.

The associate degree program is offered at Gary, South Bend, Lafayette, Indianapolis, Richmond, Madison, Evansville, Bloomington and Sellersburg. Those interested in the program are encouraged to contact the nearest campus offering a program for information concerning course and program offerings. Students graduating from the ASN program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Science (67-68 Credits)*

Specialties Offered:

None

Program Available at:

Bloomington
Evansville
Gary
Indianapolis
Lafayette
Madison
Richmond
Sellersburg
South Bend

A.S. in Nursing

Associate of Science

To earn this degree, you must have 67-68 credits in the following areas:

General Education Core	21
Technical Core	40
Specialty Core	N/A
Locally Determined Courses	6-7

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	BIO 211	General Microbiology	3
	**COM 101	Fundamentals of Public Speaking	3
		OR	
	**COM 102	Interpersonal Communication	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	PSY 101	Introduction to Psychology	3
Technical	NUR 150	Nursing and Universal Needs	4
	NUR 151	Nursing and Universal Needs Practicum	4
	NUR 152	Nursing Related to Health Deviation I	5
	NUR 153	Nursing Related to Health Deviation I Practicum	5
	NUR 154	Pharmacotherapeutics	2
	NUR 250	Nursing Related to Health Deviation II	5
	NUR 251	Nursing Related to Health Deviation II Practicum	5
	NUR 252	Nursing Related to Developmental Needs	4
	NUR 253	Nursing Related to Developmental Needs Practicum	4
	NUR 254	Professional Nursing Issues	2
Other Required Courses (6-7 Credits from these courses, determined locally)	ANP 201	Advanced Human Physiology	4
	CHM 101	Chemistry I	3
	CIS 101	Introduction to Microcomputers	3
	PSY 201	Lifespan Development	3
	SOC 111	Introduction to Sociology	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Child Development

Program Description

The Child Development program focuses on early childhood growth and development, including adult-child relationships. Emphasis is placed on the development of skills and techniques for providing appropriate environments and care for young children. Instruction is provided in the physical, emotional, social and cognitive areas of early childhood. The training is appropriate for candidates seeking the Child Development Associate (CDA) credential. The student develops competencies through classroom instruction, observation and participation in early childhood settings.

Employment opportunities include day care, nursery school, Head Start, family day care, pediatrics setting, nanny care, school aide, school age care, employer-sponsored day care, infant/toddler care, resource and referral services, intergenerational care, respite/sick care and other settings.

The two-year associate of applied science degree program requires 63 credits. A technical certificate also is available. An associate of science degree is available at selected campuses. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Programs and courses are offered in Fort Wayne, Muncie, Richmond and Indianapolis. Students graduating from the Child Development program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (63 Credits)*
- *Technical Certificate (30 Credits)*

Specialties Offered:

None

Program Available at:

Fort Wayne
Indianapolis
Muncie
Richmond

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Child Development

Associate of Applied Science

To earn this degree, you must have 63 credits in the following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	ENG 112	Exposition and Persuasion	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	PSY 101	Introduction to Psychology	3
	**BIO 101	Introductory Biology	3
		OR	
	**SCI 111	Physical Science	3
	SOC 111	Introduction to Sociology	3
Technical	CHD 121	Introduction to the Early Childhood Profession	3
	CHD 122	Child Growth and Development	3
	CHD 123	Health, Safety, and Nutrition	3
	CHD 124	Developmental and Cultural Awareness	3
	CHD 209	Families in Transition	3
	CHD 221	Emerging Literacy in Young Children	3
ther Required Courses (27 Credits)	CHD 125	Curriculum in the Creative Arts	3
	CHD 128	Child Development Practicum I	2
		AND	
	CHD 129	Child Development Practicum II	2
		OR	
	CHD 130	Child Development Practicum I and II	4
	CHD 131	Seminar in Guidance Techniques	2
	CHD 225	Cognitive Curriculum	3
		Locally Determined Courses	15

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Child Development

Technical Certificate

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	24
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ENG 101	English Composition	3
	**PSY 101	Introduction to Psychology	3
		OR	
	**SOC 111	Introduction to Sociology	3
Technical	CHD 121	Introduction to the Early Childhood Profession	3
	CHD 122	Child Growth and Development	3
	CHD 123	Health, Safety, and Nutrition	3
	CHD 124	Developmental and Cultural Awareness	3
	CHD 125	Curriculum in the Creative Arts	3
	CHD 128	Child Development Practicum I	2
	CHD 129	Child Development Practicum II	2
	CHD 131	Seminar in Guidance Techniques	2
	CHD 221	Emerging Literacy in Young Children	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Dental Assistant

Program Description

Students in the Dental Assistant program receive instruction in preparing patients for treatment and in chairside assisting as the dentist examines and treats patients. The dental assistant will expose and process X-ray films, sterilize instruments, provide oral health instruction, and assist with record keeping and other office management practices. Students gain necessary knowledge and skills in general education, basic science, dental anatomy and materials, chairside assisting, laboratory techniques, radiology and basic office procedure. In addition to academic and clinical course work on campus, students are provided with practical experience in dental offices under the supervision of College and dental office personnel.

A one-year program requiring 42 credits leads to a technical certificate. Graduates are eligible to take the certification exam administered by the Dental Assisting National Board, Inc. The program is available at Lafayette. Students graduating from the Dental Assistant program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Technical Certificate (42 Credits)*

Specialties Offered:

None

Program Available at:

Lafayette

Technical Certificate

To earn this degree, you must have 42 credits in the following areas:

General Education Core	6
Technical Core	36
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
Technical	DEN 102	Dental Materials and Laboratory I	3
	DEN 108	Preventive Dentistry/Diet and Nutrition	3
	DEN115	Preclinical Practice I	4
	DEN 116	Dental Emergencies/Pharmacology	2
	DEN 117	Dental Office Management	2
	DEN118	Dental Radiography	4
	DEN 121	Clinical Practicum II	7
	DEN 122	Clinical Practicum I	1
	DEN 123	Dental Anatomy	2
	DEN 125	Preclinical Practice II	3
	DEN 129	Dental Materials and Laboratory II	3
	DEN 131	Basic Integrated Science	2

Human Services

Program Description

The Human Services program offers students the opportunity to become human services generalists and/or to concentrate in the areas of substance abuse, gerontology, correctional rehabilitation services, or mental health.

Human services professionals reach out to individuals, families and communities. The Human Services program provides students with the broad understanding they need to help others meet their psychological, social and environmental needs. The human services generalist may find employment in a variety of settings such as community centers, group homes, substance abuse centers and nursing homes.

Those who study human services with a focus on substance abuse may find positions in substance abuse centers (residential, detoxification and hospitals) as counselors or residents-in-training. Those who focus on gerontology may find jobs in adult day care centers, senior citizens centers and extended care facilities.

Program objectives include training the entry-level worker, providing education and training to upgrade the skills and knowledge of those currently employed, and providing development and enhancement. Throughout the program, students examine their values and attitudes which reflect upon their interactions with others.

The associate of applied science degree requires 62 credits. Human Services students wishing to pursue a bachelor of arts or bachelor of science degree in Community Health at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Human Services. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU. The availability of degrees and specialties will vary from campus to campus. Interested students should contact local Ivy Tech campuses. The program is offered in Fort Wayne, Muncie, Terre Haute, and Indianapolis. Students graduating from the Human Services program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (62 Credits)*
- *Associate of Science (65 Credits)*
- *Technical Certificate in Mental Health*

Specialties Offered:

- *Correctional Rehabilitation Service*
- *Generalist*
- *Gerontology*
- *Mental Health*
- *Substance Abuse*

Program Available at:

Fort Wayne
Indianapolis
Muncie
Terre Haute

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Human Services

Associate of Applied Science

To earn this degree, you must have 62 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12
Locally Determined Courses	14

You Must Have	Required Courses		Credit Hours
General Education	**BIO 101	Introductory Biology	3
		OR	
	**SCI 111	Physical Science	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	MAT 112	Functional Mathematics	3
	POL 101	Introduction to American Government and Politics	3
	**PSY 101	Introduction to Psychology	3
		OR	
	**SOC 111	Introduction to Sociology	3
Technical			
	HMS 101	Introduction to Human Services	3
	HMS 102	Helping Relationship Techniques	3
	HMS 103	Interviewing and Assessment	3
	HMS 205	Behavioral/Reality Techniques	3
	HMS 206	Group Process and Skills	3
	HMS 207	Program Planning/Policy Issues	3
Choose One of the Following Specialties			
Correctional Rehabilitation Services Specialty (26 credits)	HMS 105	Criminal Justice Systems	3
	HMS 215	Juvenile Delinquency	3
	HMS 240	Rehabilitation Process: Probation and Parole	3
	PSY 205	Abnormal Psychology	3
		Locally Determined Courses	14

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Human Services

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
Generalist Specialty (26 credits)	CIS 101	Introduction to Microcomputers	3
	PSY 201	Lifespan Development	3
	*HMS	Human Services Elective	3
	*HMS	Human Services Elective	3
		Locally Determined Courses	14
Gerontology Specialty (26 Credits)	HMS 108	Psychology of Aging	3
	**HMS 111	Long-Term Care Activity Director	3
		OR	
	**HMS 114	Social Services in Long-Term Care	3
		OR	
	**HMS 140	Loss and Grief	3
		OR	
	**CIS 101	Introduction to Microcomputers	3
	HMS 120	Health and Aging	3
	HMS 130	Social Aspects of Aging	3
		Locally Determined Courses	14
Mental Health Specialty (26 Credits)	HMS 104	Crisis Intervention	3
	HMS 220	Legal Aspects	3
	PSY 201	Lifespan Development	3
	PSY 205	Abnormal Psychology	3
		Locally Determined Courses	14
Substance Abuse Specialty (26 Credits)	HMS 113	Problems of Substance Abuse in Society	3
	HMS 208	Treatment Models of Substance Abuse	3
	HMS 209	Counseling Issues	3
	HMS 210	Codependency	3
		Locally Determined Courses	14

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Human Services

Associate of Science

To earn this degree, you must have 65 credits in the following areas:

General Education Core	27
Technical Core	38
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BA or BS in Community Health

You Must Have	Required Courses		Credit Hours
General Education	BIO 101	Introductory Biology	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
	POL 101	Introduction to American Government and Politics	3
	PSY 101	Introduction to Psychology	3
	PSY 201	Lifespan Development	3
	SOC 111	Introduction to Sociology	3
Technical	CHD 123	Health, Safety, and Nutrition	3
		OR	
	CIS 101	Introduction to Microcomputers	3
	HMS 101	Introduction to Human Services	3
	HMS 102	Helping Relationship Techniques	3
	HMS 103	Interviewing and Assessment	3
	HMS 104	Crisis Intervention	3
	HMS 201	Internship I	4
	HMS 202	Internship II	4
	HMS 203	Internship Seminar I	3
	HMS 204	Internship Seminar II	3
	HMS 205	Behavioral/Reality Techniques	3
	HMS 206	Group Process and Skills	3
	HMS 207	Program Planning/Policy Issues	3

Human Services

Technical Certificate—Mental Health

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Other Required Courses	6
Locally Determined Courses	14

You Must Have		Required Courses	Credit Hours
General Education	COM 102	Introduction to Interpersonal Communication	3
	PSY 101	Introduction to Psychology	3
Technical	HMS 101	Introduction to Human Services	3
Other Required Courses (20 Credits)	HMS 205	Behavioral/Reality Techniques	3
	PSY 205	Abnormal Psychology	3
		Locally Determined Courses	14

Medical Assistant

Program Description

The graduate of the Medical Assistant program is a professional, multi-skilled person dedicated to assisting in patient care management, primarily in a physician's office. The practitioner performs administrative and clinical duties and may manage emergency situations, facilities and/or personnel. Competence in the field also requires that a medical assistant display professionalism, communicate effectively and provide instruction to patients. A required externship under the direct supervision of a physician provides valuable on-the-job experience.

Graduates of the AAS and TC (Generalist Specialty) in the Medical Assistant Program will be prepared to take the Certification Examination of the American Association of Medical Assistants (AAMA) and the American Medical Association (AMA).

The two-year associate of applied science program requires 63 credits for completion. Technical and career development certificates also are available. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Programs are offered in Columbus, Evansville, Fort Wayne, Anderson, Richmond, Indianapolis, Kokomo, Lafayette, Madison, Muncie, Sellersburg, South Bend, Terre Haute and Valparaiso. Students graduating from the Medical Assistant program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (63 Credits)*
- *Technical Certificate (30-48 Credits)*

Specialties Offered:

- *Administrative*
- *Clinical*
- *Generalist*
- *Pharmacy Technician*

Program Available at:

Anderson
Columbus
Evansville
Fort Wayne
Indianapolis
Kokomo
Lafayette
Madison
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Medical Assistant

Associate of Applied Science

To earn this degree, you must have 63 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	21
Locally Determined Courses	6

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	*MAT	Math Elective	3
	*	Humanities/Social Sciences Elective	3
Technical	HHS 101	Medical Terminology	3
	HHS 102	Medical Law and Ethics	2
	MEA 102	First Aid and CPR	2
	MEA 113	Pharmacology	3
	MEA 131	Medical Financial Management	3
	MEA 132	Computer Concepts in the Medical Office	2
	MEA 203	Disease Conditions	3
Other Required Courses (27 credits)	MEA 114	M.A. Lab Techniques	3
	MEA 115	Medical Insurance	2
	MEA120	M.A. Clinical Extern	3
	MEA 121	M.A. Administrative Extern	3
	MEA 130	Medical Office Administration	2
	MEA 133	Clinical Theory	3
	MEA 134	Clinical Skills Lab	2
	MEA135	Medical Word Processing/Transcription	3
		Locally Determined Courses	6

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Medical Assistant

Technical Certificate

To earn this degree, you must have 30-48 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6-39
Locally Determined Courses	0-15

You Must Have		Required Courses	Credit Hours
General Education	COM 102	Introduction to Interpersonal Communication	3
	*	Science/Mathematics/Humanities Elective	3
Technical	HHS 101	Medical Terminology	3
Choose One Specialty			
Administrative Specialty (21 Credits)	HHS 102	Medical Law and Ethics	2
	MEA 130	Medical Office Administration	2
	MEA 132	Computer Concepts in the Medical Office	2
		Locally Determined Courses	15
Clinical Specialty (21 Credits)	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
		Locally Determined Courses	15
Generalist Specialty (39 Credits)	ANP 102	Anatomy and Physiology II	3
	ENG 111	English Composition	3
	HHS 102	Medical Law and Ethics	2
	MEA 102	First Aid and CPR	2
	MEA 113	Pharmacology	3
	MEA 114	M.A. Lab Techniques	3
	MEA 115	Medical Insurance	2
	MEA 120	M.A. Clinical Extern	3
	MEA 121	M.A. Administrative Extern	3
	MEA 130	Medical Office Administration	2
	MEA 131	Medical Financial Management	3
	MEA 132	Computer Concepts in the Medical Office	2
	MEA 133	Clinical Theory	3
	MEA 134	Clinical Skills Lab	2
	MEA 135	Medical Word Processing/Transcription	3
Pharmacy Technician Specialty (21 Credits)	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	HHS 102	Medical Law and Ethics	2
	MEA 113	Pharmacology	3
	MEA 151	Pharmacy Technician I	3
	MEA 152	Administrative Aspects of Pharmacy Technology	3
	MEA 153	Pharmacy Technician Administration	2
	MEA 154	Pharmacy Externship	2

Medical Laboratory Technician

Program Description

The Medical Laboratory Technician program is designed to prepare graduates to work in clinics, physicians' offices, hospitals and research laboratories as medical laboratory technicians. Medical laboratory technicians perform laboratory procedures, define and solve associated problems, and use quality control techniques to aid in the diagnosis, treatment and monitoring of patients. Courses in bacteriology, parasitology, chemistry, hematology, immunology, anatomy, physiology and immunohematology provide both theory and practical applications.

The associate of applied science degree program requires 67 credits. Programs are offered in South Bend and Terre Haute. Students graduating from the Medical Laboratory Technician program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (67 Credits)*

Specialties Offered:

None

Program Available at:

South Bend
Terre Haute

Medical Laboratory Technician

Associate of Applied Science

To earn this degree, you must have 67 credits in the following areas:

General Education Core	18
Technical Core	31
Other Required Courses	18
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	#ANP 101	Anatomy and Physiology I	3
	#ANP 102	Anatomy and Physiology II	3
	#BIO 111	General Microbiology	3
	**COM 101	Fundamentals of Public Speaking	3
		OR	
	**COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	**PSY 101	Introduction to Psychology	3
		OR	
	**SOC 111	Introduction to Sociology	3

Must take two of these three courses. They are not electives. Which two you must take will be determined locally.

Technical	CHM 101	Chemistry I	3
	HHS 102	Medical Law and Ethics	2
	MLT 101	Fundamentals of Laboratory Techniques	3
	MLT 102	Routine Analysis Techniques	3
	MLT 201	Immunology Techniques	3
	MLT 202	Immunohematology Techniques	3
	MLT 205	Hematology Techniques I	3
	MLT 206	Hematology Techniques II	3
	MLT 207	Chemistry Techniques I	3
	MLT 222	Microbiology Techniques	3
	MLT 227	Chemistry Techniques II	2
Other Required Courses	MLT 209	Routine Analysis Applications	1
	MLT 210	Hematology Applications	3
	MLT 212	Immunology Applications	1
	MLT 213	Immunohematology Applications	3
	MLT 215	Parasitology and Mycology	1
	MLT 218	Clinical Pathology	3
	MLT 221	Microbiology Applications	3
	MLT 224	Chemistry Applications	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Occupational Therapy Assistan

Program Description

Occupational therapy directs an individual's participation in selected tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaptation and productivity, diminish or correct pathology, and promote and maintain health. An occupational therapy assistant provides service to individuals whose abilities to cope with living tasks have been threatened or impaired by developmental deficits, the aging process, physical injury or illness, or psychological disability. The profession serves a diverse population in a variety of settings such as hospitals and clinics, rehabilitation facilities, long-term care facilities, extended care facilities, sheltered workshops, schools and camps, private homes and community agencies.

The associate of science degree in Occupational Therapy Assistant is offered in Indianapolis. Students graduating from the Occupational Therapy Assistant program participate in evaluations of proficiency in general and technical education. Graduates of the program will be able to sit for the national certification examination for the Occupational Therapy Assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a certified Occupational Therapy Assistant (COTA). Most states, including Indiana, require a license to practice.

Degrees Available

- *Associate of Science (72 Credits)*

Specialties Offered

None

Program Available at:

Indianapolis

Occupational Therapy Assistant

Associate of Science

To earn this degree, you must have 72 credits in the following areas:

General Education Core	31
Technical Core	26
Other Required Courses	15
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	ANP 201	Advanced Human Physiology	4
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	PSY 101	Introduction to Psychology	3
	PSY 201	Lifespan Development	3
	PSY 205	Abnormal Psychology	3
	SOC 111	Introduction to Sociology	3
Technical	OTA 101	Foundations of Occupational Therapy	3
	OTA 102	Kinesiology	2
	OTA 103	Medical Conditions in Occupational Therapy	3
	OTA 202	Therapeutic Activities	3
	OTA 203	Therapeutic Group Activities	3
	OTA 204	Psychiatric Conditions in Occupational Therapy	3
	OTA 205	COTA in Physical Health	3
	OTA 208	COTA and Interactive Model	3
	OTA 210	COTA in Mental Health	3
her Required Courses (15 Credits)	OTA 201	Field Work 1 - A	1
	OTA 206	Assistive Technology and Adaptive Equipment	2
	OTA 207	Daily Living Skills	3
	OTA 209	Field Work 1 - B	1
	OTA 211	Clinical Transition and Management	4
	OTA 212	Field Work 2 - A	2
	OTA 213	Field Work 2 - B	2

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Paramedic Science

Program Description

The Paramedic Science program prepares competent health care providers who possess the professional qualities required to function in the uncontrolled environment of emergency medicine in the pre-hospital setting. The program qualifies graduates for state certification as emergency medical technician-paramedics. Students will gain the knowledge and skills to manage the hostile environment of accidents and traumatic occurrences in the pre-hospital setting including disentanglement, controlling armed encounters, accomplishing rescue techniques and demonstrating patient care procedures. The curriculum includes clinical and practical instruction as well as a field internship in advanced emergency care and services. The degree requires 65.5 credit hours for completion and is offered in Evansville and Kokomo. Students graduating from the Paramedic Science program participate in evaluations of proficiency in general and technical education.

Degrees Available

- *Associate of Applied Science (65.5 Credit*

Specialties Offered

None

Program Available at:

Evansville
Kokomo

Paramedic Science

Associate of Applied Science

To earn this degree, you must have 65.5 credits in the following areas:

General Education Core	18
Technical Core	47.5
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	PHL 102	Introduction to Ethics	3
	MAT 111	Intermediate Algebra	3
Technical	PAR 102	Emergency Medical Technician-Basic Training	7.5
	PAR 106	Prehospital Environment	1.5
	PAR 113	Preparatory I	2.5
	PAR 114	Preparatory II	3.5
	PAR 202	Trauma	4
	PAR 207	Medical	7.5
	PAR 208	Medical Emergencies	5
	PAR 209	Age Emergencies	4.5
	PAR 212	OB/GYN/Neonatal/Behavioral	5.5
	PAR 218	Ambulance Internship Phase III	6

Physical Therapist Assistan

Program Description

A physical therapist assistant is a health care worker who is educated at the associate degree level and carries out many patient-care functions under the supervision of the physical therapist. Training provides the student with the cognitive and affective competencies to administer therapeutic and psychosocial support for individuals with musculoskeletal, neurological, sensorimotor, cardiopulmonary, vascular or other physiological dysfunctions. The physical therapist assistant works under the supervision of a physical therapist in a variety of clinical settings that may include a hospital, nursing home, wellness center, athletic facility, private office or home. Physical therapist assistants (PTAs) may include in their duties application of hot and cold modalities, massage, therapeutic exercise, gait training, adjusting and fitting of braces and splints, electrical stimulation, biofeedback and patient and family education.

The required course work for the A.S. in Physical Therapist Assistant totals 66 hours and is comprised of 42 semester hours of technical course work and 24 hours of general education. A cooperative program with community hospitals and facilities allows the student to gain the necessary patient contact and clinical experience. The program is offered in Gary and Muncie. Students graduating from the Physical Therapist Assistant program participate in evaluations of proficiency in general and technical education. Graduates of the program will be able to sit for the Physical Therapist Assistant licensure examination, administered under the direction of the Indiana State Health Professions Bureau. Most states, including Indiana, require a license to practice.

Degrees Available:

- *Associate of Science (66 Credits)*

Specialties Offered

None

Program Available at:

Gary
Muncie

Physical Therapist Assistant

Associate of Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	24
Technical Core	42
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	**COM 101	Fundamentals of Public Speaking	3
		OR	
	**COM 102	Introduction to Interpersonal Communications	3
	ENG 111	English Composition: Strategies for Inquiry	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	PSY 101	Introduction to Psychology	3
	SOC 111	Introduction to Sociology	3
	SCI 111	Physical Science	3
Technical	PTA 101	Introduction to Physical Therapist Assisting	3
	PTA 102	Diseases, Trauma, and Terminology	3
	PTA 103	Administrative Aspects of Physical Therapist Assisting	3
	PTA 106	PTA Treatment Modalities I	5
	PTA 107	Kinesiology	5
	PTA 115	Clinical I	2
	PTA 205	Clinical II	5
	PTA 207	PTA Treatment Modalities II	5
	PTA 215	Clinical III	5
	PTA 217	PTA Treatment Modalities III	5
	PTA 224	Current Issues and Review	1

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Practical Nursing

Program Description

The licensed practical nurse (LPN) is an integral part of the health care team. The Practical Nursing program is a one-year course of study leading to a technical certificate. This accredited program prepares the individual to take the state licensure exam to become a licensed practical nurse. The program is designed for students to gain knowledge and technical skills necessary to care appropriately for patients in a variety of health care settings such as hospitals, convalescent centers and physicians' offices. Students learn to administer medications and treatments commonly performed by licensed practical nurses. All courses must be completed with a grade of "C" or better.

Career and educational mobility are also provided for those who wish to progress to the Associate of Science in Nursing level. A description of this transition is found in the Associate of Science in Nursing program description.

The LPN program is offered in Gary, Valparaiso, South Bend, Elkhart, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Terre Haute, Greencastle, Indianapolis, Richmond, Columbus, Bloomington, Madison, Evansville and Sellersburg.

Degrees Available

- *Technical Certificate (51-52 Credits)*

Specialties Offered

None

Program Available at:

Bloomington
Columbus
Elkhart
Evansville
Fort Wayne
Gary
Greencastle
Indianapolis
Kokomo
Lafayette
Logansport
Madison
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso

Practical Nursing

Technical Certificate

To earn this degree, you must have 51-52 credits in the following areas:

General Education Core	6
Technical Core	45-46
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education			
	COM 102	Introduction to Interpersonal Communication	3
	PSY 101	Introduction to Psychology	3
Technical	PNU 114	Nursing Issues and Trends	1
	PNU 121	Introduction to Nursing I	4
	PNU 122	Introduction to Nursing II	6
	PNU 123	Pharmacology	3
	**PNU 126	Integrated Life Science	5
		OR	
	**ANP 101	Anatomy and Physiology I	3
		AND	
	**ANP 102	Anatomy and Physiology II	3
	PNU 127	Care of the Adult	5
	PNU 128	Care of the Adult	5
	PNU 129	Care of the Adult	5
	PNU 130	Nursing Care of the Older Adult	5
	PNU 131	Nursing Care of the Child-Bearing Family	6

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Radiologic Technology

Program Description

The radiologic technologist prepares and positions patients for X-rays, determines the proper voltage, current, and exposure time, and operates the equipment. Trained radiologic technologists work in hospitals, medical laboratories, physicians' and dentists' offices and clinics, federal and state health agencies, and certain educational institutions.

The associate of applied science program includes courses in the following areas: radiologic technique, exposure, positioning, protection, radiation physics and ethics. Clinical practice and supplemental instruction are provided in accredited hospitals. Upon completion of program requirements, graduates are eligible to take the National Registry Examination. The program is offered in Indianapolis and Terre Haute. Students graduating from the Radiologic Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (84 Credits)*

Specialties Offered

None

Program Available at:

Indianapolis
Terre Haute

Radiologic Technology

Associate of Applied Science

To earn this degree, you must have 84 credits in the following areas:

General Education Core	18
Technical Core	63
Specialty Core	N/A
Locally Determined Courses	3

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	**PSY 101	Introduction to Psychology	3
		OR	
	**SOC 111	Introduction to Sociology	3
Technical	CIS 101	Introduction to Microcomputers	3
	HHS 101	Medical Terminology	3
	HHS 102	Medical Law and Ethics	2
	**	Pharmacology	3
	RAD 101	Orientation/Nursing X-Ray Technology	4
	RAD 102	Principles of Radiographic Exposures I	2
	RAD 103	Radiographic Positioning I	3
	RAD 104	X-Ray Clinical Education I	4
	RAD 105	Radiographic Positioning II	3
	RAD 106	X-Ray Clinical Education II	4
	RAD 107	Radiation Physics	3
	RAD 109	Imaging Techniques	2
	RAD 201	Radiographic Positioning III	2
	RAD 202	X-Ray Clinical Education III	4
	RAD 203	X-Ray Clinical Education IV	4
	RAD 204	X-Ray Clinical Education V	4
	RAD 205	Pathology for Radiologic Technology	2
	RAD 206	Radiobiology and Radiation Protection	3
	RAD 208	Principles of Radiographic Exposures II	2
	RAD 209	Radiographic Positioning IV	3
	RAD 299	General Examination Review	3
	-	Locally Determined Courses	3

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Respiratory Care

Program Description

A respiratory care practitioner is an allied health professional who works under the direction of physicians in the diagnosis, evaluation, treatment, education and care of patients with cardiopulmonary diseases or abnormalities.

A graduate of the associate of applied science/associate of science program will be eligible to take the entry level and advanced practitioner exams given by the National Board for Respiratory Care (NBRC). Successful examination candidates will be awarded the Registered Respiratory Therapist credential. A graduate of the technical certificate program will be eligible to take the entry-level practitioner exam given by the NBRC. Successful exam candidates will be awarded the Certified Respiratory Therapy Technician credential.

The two-year associate of applied science degree requires 79 credits for completion. An associate of science degree is available at selected campuses. Technical certificates also are offered. The availability of degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Programs are offered in Fort Wayne, Indianapolis, Lafayette and Valparaiso. Students graduating from the Respiratory Care program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (79 Credits)*
- *Technical Certificate (51 Credits)*

Specialties Offered:

None

Program Available at:

Fort Wayne
Indianapolis
Lafayette
Valparaiso

Respiratory Care

Associate of Applied Science

To earn this degree, you must have 79 credits in the following areas:

General Education Core	24
Technical Core	55
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	BIO 211	General Microbiology	3
	CHM 101	Chemistry I	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
	PSY 101	Introduction to Psychology	3
Technical	RES 121	Introduction to Respiratory Care	6
	RES 122	Therapeutic Modalities	3
	RES 123	Cardiopulmonary Physiology	3
	RES 124	Clinical Practicum I	3
	RES 125	Critical Care I	3
	RES 126	Clinical Medicine I	3
	RES 127	Clinical Practicum II	3
	RES 128	Clinical Practicum III	9
	RES 221	Cardiopulmonary Diagnostics	3
	RES 222	Critical Care II	3
	RES 223	Respiratory Pharmacology	3
	RES 224	Clinical Medicine II	3
	RES 225	Emergency Management	1
	RES 226	Continuing Care	2
	RES 227	Clinical Practicum IV	6
	RES 228	Information Systems for Health Care	1

Respiratory Care

Technical Certificate

To earn this degree, you must have 51 credits in the following areas:

General Education Core	18
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have	Required Courses		Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	BIO 211	General Microbiology	3
	CHM 101	Chemistry I	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
Technical	RES 121	Introduction to Respiratory Care	6
	RES 122	Therapeutic Modalities	3
	RES 123	Cardiopulmonary Physiology	3
	RES 124	Clinical Practicum I	3
	RES 125	Critical Care I	3
	RES 126	Clinical Medicine I	3
	RES 127	Clinical Practicum II	3
	RES 128	Clinical Practicum III	9

Surgical Technology

Program Description

The surgical technologist is a member of the surgical team, qualified by didactic and clinical education to provide safe and efficient care to the patient in the operating room. Instruction consists of courses in anatomy and physiology, microbiology, pharmacology, medical law and ethics, surgical techniques and surgical procedures.

Closely supervised clinical education is provided in local area hospitals. The surgical technologist actively participates in surgery by performing scrub and/or circulating duties which include passing instruments and supplies to surgical team members, preparing and positioning the patient, operating equipment, assisting the anesthesiologist and keeping accurate records. Obstetrical and emergency room clinical experiences may be provided by specific hospitals. The two-year associate of applied science program requires 67 credits. The program is offered in Valparaiso, Lafayette, Indianapolis and Evansville. Students graduating from the Surgical Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (67 Credits)*

Specialties Offered:

None

Program Available at:

Evansville
Indianapolis
Lafayette
Valparaiso

Surgical Technology

Associate of Applied Science

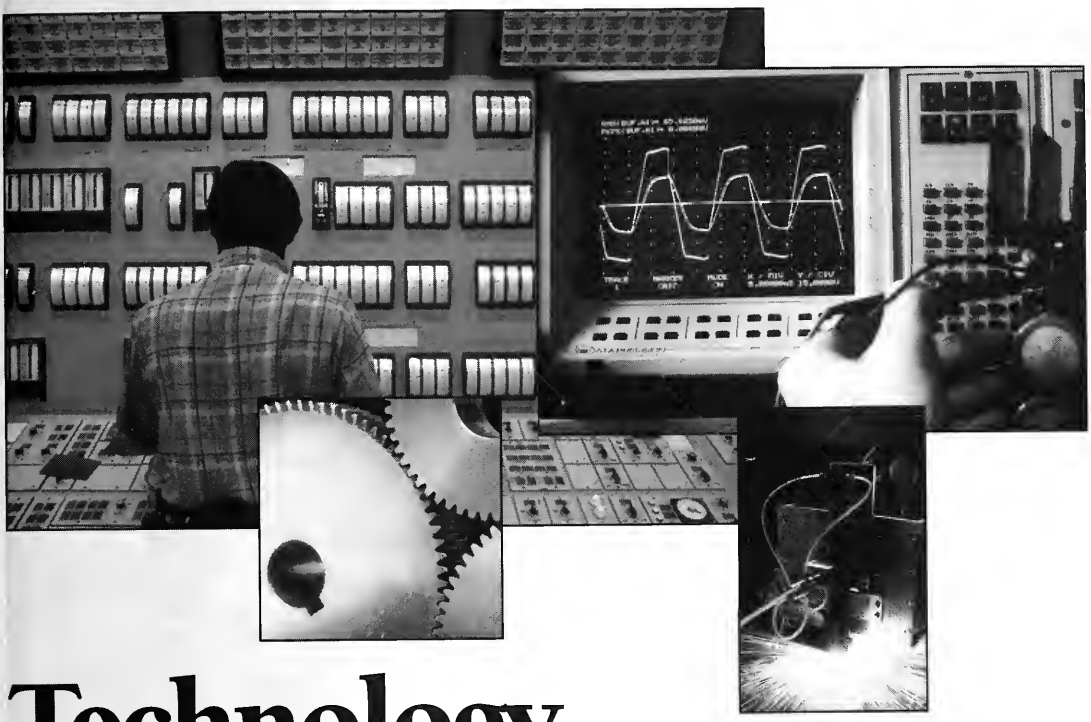
To earn this degree, you must have 67 credits in the following areas:

General Education Core	21
Technical Core	46
Other Required Courses	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ANP 101	Anatomy and Physiology I	3
	ANP 102	Anatomy and Physiology II	3
	BIO 211	General Microbiology	3
	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	**PSY 101	Introduction to Psychology	3
		OR	
	**SOC 111	Introduction to Sociology	3
Technical	HHS 101	Medical Terminology	3
	HHS 102	Medical Law and Ethics	2
	MEA 113	Pharmacology	3
	SUR 101	Surgical Techniques	3
	SUR 102	Surgical Procedures I	3
	SUR 103	Fundamentals of Surgical Technology	6
	SUR 104	Surgical Procedures II	6
	SUR 105	Clinical Applications I	9
	SUR 106	Surgical Procedures III	3
	SUR 107	Clinical Applications II	8

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course



Technology

The Technology Division provides broad, practical education for those seeking employment and advancement in craft and technical occupations and for those seeking further education. The programs emphasize the ability to think and plan in the job setting and to address technical problems. Initial laboratory experiences develop skills in the use of modern industrial equipment and measuring instruments. Later classroom and laboratory work provide training in industrial applications of theory, analysis, design and construction techniques. Each program provides opportunities for the student to advance from basic skills to proficiency on a high technological level.

Program advisory committees, composed of experts in each area of industry, serve the important function of keeping the content of the programs current with the needs of industries to assure graduates of employability in today's labor market. The practical value of the coursework is substantiated by its use in the training programs of many local industries. Each program is administered and taught by faculty who have industrial/technical/professional experience and who are dedicated to technical education. The student is advised to contact the nearest Ivy Tech center for information concerning programs and course offerings.

Aircraft Maintenance Technology

Program Description

The Aircraft Maintenance Technology program prepares students to become certified Aviation Maintenance Technicians with ratings of Airframe and Powerplant (A&P). The course of instruction introduces control methods, team building, technical writing and computer skills. Opportunities exist for employment with commercial air carriers and private maintenance operations.

Completion of the two-year program, consisting of 88 credit hours, will lead to an associate degree. The program is offered in Terre Haute. Students graduating from the Aircraft Maintenance Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (88 Credits)*

Specialties Offered:

- *Airframe and Powerplant*

Program Available at:

Terre Haute

Aircraft Maintenance Technology

Associate of Applied Science

To earn this degree, you must have 88 credits in the following areas:

General Education Core	18
Technical Core	42
Specialty Core	28
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
	*	Life/Physical Science Elective	3
	*	Humanities/Social Science Elective	3
	*	One elective from the following: English, Math, Humanities/Social Sciences, or Life/Physical Sciences	3
Technical	AVT 110	Aircraft Electricity and Basic Science	8
	AVT 111	Aviation Basics	7
	AVT 120	Airframe Sheetmetal	6
	AVT 122	Airframe Structures	7
	AVT 124	Airframe Systems	7
	AVT 126	Airframe Avionics and Electronics Systems	7
Airframe and Powerplant Specialty (28 credits)	AVT 130	Reciprocating Powerplant	7
	AVT 132	Powerplant Systems and Components I	7
	AVT 134	Turbine Powerplant	7
	AVT 136	Powerplant Systems and Components II	7

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Automotive Technology

Program Description

The Automotive Technology Program prepares students with the general and technical education needed for successful careers in automotive service, sales, technical support, management and customer relations, and for continuation in higher education. A student in the Automotive Technology program may specialize in automotive body repair or automotive service.

A two-year program requiring 60-61 credits leads to an associate of applied science degree. Automotive Technology students wishing to pursue a bachelor of science in Industrial Automotive Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program (pending authorization) in Automotive Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU.

Technical and career development certificates also are available. Programs are offered in East Chicago, Valparaiso, South Bend, Fort Wayne, Lafayette, Kokomo, Muncie, Terre Haute, Indianapolis, Richmond, Columbus, Madison, Evansville, Tell City and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact the local Ivy Tech campus. Students graduating from the Automotive Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (60-61 Credits)*
- *Associate of Science (64 Credits)*
- *Technical Certificate (39 Credits)*

Specialties Offered:

- *Automotive Body Repa*
- *Automotive Service*

Program Available at:

Columbus
East Chicago
Evansville
Fort Wayne
Indianapolis
Kokomo
Lafayette
Madison
Muncie
Richmond
Sellersburg
South Bend
Tell City
Terre Haute
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Automotive Technology

Associate of Applied Science

To earn this degree, you must have 60-61 credits in the following areas:

General Education Core	18-19
Technical Core	18
Specialty Core	12
Locally Determined Courses	12

You Must Have		Required Courses	Credit Hours
General Education	**COM	Communications Course	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	**	General Education Course	3
	**	Humanities/Social Sciences Course	3
	**	Life/Physical Science Course	3-4
Technical	AMV 100	Introduction to Transportation	3
	AMV 101	Chassis and Suspension Principles	3
	AMV 107	Engine Principles and Design	3
	AMV 113	Electricity for Transportation	3
	AMV 202	Computer Engine Controls	3
	TEC 104	Computer Fundamentals for Technology	3
Choose One of the following Specialties			
Automotive Body Repair Specialty (24 credits)	ABR 101	Body Repair Fundamentals	3
	ABR 103	Auto Paint Fundamentals	3
	^ABR 104	Collision Damage Analysis and Repair	3
	ABR 106	Body Repair Applications	3
		Locally Determined Courses	12
Automotive Service Specialty (24 Credits)	AST 105	Fuel Systems	3
	AST 201	Heating and Air Conditioning Principles	3
	AST 209	Automotive Braking Systems	3
	AST 220	Transaxle and Driveline Service	3
		Locally Determined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Automotive Technology

Associate of Science ‡

To earn this degree, you must have 64 credits in the following areas:

General Education Core	28
Technical Core	36
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Automotive Technology program

You Must Have		Required Courses	Credit Hours
General Education	CHM 101	Chemistry I	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 111	Intermediate Algebra	3
	MAT 121	Geometry-Trigonometry	3
	PHY 101	Physics I	4
	***	Social Sciences Elective	6
Technical	AMV 101	Chassis and Suspension Principles	3
	AMV 107	Engine Principles and Design	3
	AST 105	Fuel Systems	3
		OR	
	AMV 113	Electricity for Transportation	3
	AMV 202	Computer Engine Controls	3
	AST 104	Start and Charge Systems	3
	AST 106	Electronic Ignition Systems	3
	AST 201	Heating and Air Conditioning Principles	3
		OR	
	AST 209	Automotive Braking Systems	3
	AST 204	Auto Transmission/Transaxle	3
		OR	
	AST 208	Differentials/Drivelines	3
	AST 207	Engine Performance	3
	AST 220	Transaxle and Driveline Service	3
	IDS 104	Fluid Power Basics	3
	TEC 104	Computer Fundamentals for Technology	3

‡ Pending authorization

*** Elective from courses that transfer to ISU.

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Automotive Technology

Technical Certificate

To earn this degree, you must have 39 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	24

You Must Have		Required Courses	Credit Hours
General Education	COM 102	Introduction to Interpersonal Communication	3
	*	Social Sciences/Math/Life or Physical Sciences/Humanities	3
Technical	AMV 101	Chassis and Suspension Principles	3
Choose One Specialty			
Automotive Body Repair Specialty (30 Credits)	ABR 101	Body Repair Fundamentals	3
	ABR 103	Auto Paint Fundamentals	3
		Locally Determined Courses	24
Automotive Service Specialty (30 Credits)	AMV 100	Introduction to Transportation	3
	TEC 104	Computer Fundamentals for Technology	3
		Locally Determined Courses	24

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Avionics

Program Description

The Avionics Technical Certificate program prepares graduates to maintain modern aircraft avionic systems. These aircraft systems fall under the categories of power generation, communications and radar, and navigation and flight control. Basic courses emphasize an understanding of electrical, electronic and computer fundamentals. Advanced courses apply these fundamentals to the operation of the aircraft systems. The program is offered in Terre Haute. Students graduating from the Avionics Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Technical Certificate (41 Credits)*

Specialties Offered:

None

Program Available at:

Terre Haute

Technical Certificate

To earn this degree, you must have 41 credits in the following areas:

General Education Core	9
Technical Core	32
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 131	Algebra/Trigonometry	3
Technical	AVT 101	Aviation Fundamentals	3
	AVT 104	Introduction to Avionics	3
	AVT 205	Navigation and Communications Systems	3
	AVT 206	Aviation Control Circuits	3
	ELT 124	Digital I	3
	ELT 222	Microprocessors	4
	ELT 228	Communications Electronics	3
	ELT 242	F.C.C. License Preparation	1
	QSC 101	Quality Control Concepts and Techniques	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 113	Basic Electricity	3

Construction Technology

Program Description

The Construction Technology program educates technicians with broad-based skills in construction methods, estimation and specification, and blueprint interpretation. Students may choose a specialty area to build on the foundation skills. Specialized courses are offered in architectural design, residential and light carpentry, cabinetry, surveying, and heating, ventilation and air conditioning. The flexibility of the program allows students to pursue a full course of study or take courses as needed to update skills.

Associate of applied science degrees require 61 to 64 credits. Specialties are available in architecture, cabinetry, heating, ventilation and air conditioning, residential and light carpentry, and surveying. Technical and career development certificates also are available. Programs are offered in Fort Wayne, Kokomo, Muncie, Richmond and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Construction Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (61-64 Credits)*
- *Technical Certificate (30-39 Credits)*

Specialties Offered:

- *Architectural*
- *Cabinetry*
- *Heating, Ventilation, and Air Conditioning*
- *Residential and Light Carpentry*
- *Surveying*

Program Available at:

Fort Wayne
Kokomo
Muncie
Richmond
Sellersburg

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Construction Technology

Associate of Applied Science

To earn this degree, you must have 61-64 credits in the following areas:

General Education Core	19
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	9-15

You Must Have		Required Courses	Credit Hours
General Education	**COM	Communications Course	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	MAT 121	Geometry/Trigonometry	3
	PHY 100	Technical Physics	4
	*	Humanities/Social Sciences Elective	3
Technical	CON 101	Introduction to Construction Technology	3
	CON 106	Construction Blueprint Reading	3
	^CON 204	Estimating and Specifications	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 113	Basic Electricity	3
Choose One of the Following Specialties			
Architectural Specialty (24 credits)	DCT 105	Facilities Design and Layout	3
	DCT 109	Construction Materials and Specifications	3
	DCT 204	Architectural CAD	3
	DCT 208	Structural Detailing	3
	DSN 103	CAD Fundamentals	3
		Locally Determined Courses	9
Cabinetry Specialty (24 Credits)	BCT 107	Furniture Design and Construction	3
	BCT 108	Cabinetry Fabrication Techniques	3
	BCT 111	Woodworking Fundamentals	3
	BCT 113	Cabinetry/Furniture Door and Drawer Assembly	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Construction Technology

Associate of Applied Science—Specialties

You Must Have		Required Courses	Credit Hours
Heating, Ventilation, and Air Conditioning Specialty (27 Credits)	HEA 101	Heating Fundamentals	3
	HEA 103	Refrigeration I	3
	HEA 104	Heating Service	3
	HEA 106	Refrigeration II	3
	HEA 202	Electrical Circuits and Controls	3
		Locally Determined Courses	12
Residential and Light Carpentry Specialty (24 credits)	BCT 104	Floor and Wall Layout and Construction	3
	BCT 105	Roof Construction	3
	BCT 114	Exterior Trim	3
	BCT 221	Interior Trim	3
		Locally Determined Courses	12
Surveying Specialty (24 Credits)	DCT 210	Surveying I	3
	DCT 213	CAD Mapping	3
	DSN 103	CAD Fundamentals	3
	DSN 106	Descriptive Geometry	3
		Locally Determined Courses	12

Technical Certificate

To earn this degree, you must have 30-39 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15-24

You Must Have		Required Courses	Credit Hours
General Education	**COM 102	Introduction to Interpersonal Communication	3
		OR	
	**ENG 111	English Composition	3
	*	Math/Social Sciences/Humanities/Life/Physical Sciences Elective	3
Technical	CON 101	Introduction to Construction Technology	3
Choose One Specialty			
Heating, Ventilation, and Air Conditioning Specialty (30 credits)	HEA 101	Heating Fundamentals	3
	HEA 103	Refrigeration I	3
		Locally Determined Courses	24
Residential and Light Carpentry Specialty (21 credits)	BCT 104	Floor and Wall Layout and Construction	3
	BCT 105	Roof Construction	3
		Locally Determined Courses	15

Design Technology

Program Description

The Design Technology program is competency-based and is designed to be responsive to the needs of business and industry. The program provides an environment conducive to the development of general knowledge, technical skills and critical thinking skills, so graduates may enter their profession as entry-level technicians. They also are prepared to respond to future advances and changes in their profession. Graduates have the necessary skills to choose other related and challenging careers or continue their education at other postsecondary institutions.

Associate of applied science degrees require 64 credits. Specialties include architecture, civil, computer-aided drafting design and manufacturing, heating, ventilation and air conditioning, mechanical, and technical illustration.

Design students wishing to pursue a bachelor of science degree in Mechanical Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Design Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU.

Technical and career development certificates also are available. Programs are offered in Gary, East Chicago, Valparaiso, Elkhart, South Bend, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Terre Haute, Indianapolis, Bloomington, Columbus, Evansville and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Design Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (64 Credits)*
- *Associate of Science (64 Credits)*
- *Technical Certificate (33 Credits)*

Specialties Offered:

- *Architecture*
- *Civil*
- *CAD/CAM*
- *Heating, Ventilation, and Air Conditioning*
- *Mechanical*
- *Technical Illustration*

Program Available at:

Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Logansport
Muncie
Sellersburg
South Bend
Terre Haute
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Design Technology

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	19
Technical Core	18
Specialty Core	12
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	*MAT 111	Intermediate Algebra	3
		OR	
	*MAT 131	Algebra/Trigonometry I	3
	*MAT 121	Geometry/Trigonometry	3
		OR	
	*MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	*	Humanities/Social Sciences Elective	3
Technical	DSN 103	CAD Fundamentals	3
	DSN 106	Descriptive Geometry	3
	DSN 220	Advanced CAD	3
	^DSN 221	Statics	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
Choose One of the ollowing Specialties			
Architecture Specialty (27 credits)	DCT 105	Facilities Design and Layout	3
	DCT 109	Construction Materials and Specifications	3
	DCT 204	Architectural CAD	3
	DCT 208	Structural Detailing	3
		Locally Determined Courses	15
Civil Specialty (27 Credits)	DCT 109	Construction Materials and Specifications	3
	DCT 208	Structural Detailing	3
	DCT 210	Surveying I	3
	DCT 213	CAD Mapping	3
		Locally Determined Courses	15

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Design Technology

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
Computer-Aided Drafting Design and Manufacturing Specialty (27 credits)	MTT 208	CNC Programming I	3
	MTT 220	CAD/CAM I	3
	MTT 221	CAD/CAM II	3
	TEC 101	Manufacturing Processes	3
		Locally Determined Courses	15
Heating, Ventilation, and Air Conditioning Design Specialty (27 Credits)	HEA 207	HVAC Codes	3
	HEA 214	Applied Design	3
	HEA 220	Air Distribution Systems	3
	HEA 222	Environmental Control Systems	3
		Locally Determined Courses	15
Mechanical Specialty (27 Credits)	DCT 104	Product Drafting	3
	DCT 202	CAD Programming Language	3
	DCT 217	Product Design	3
	TEC 101	Manufacturing Processes	3
		Locally Determined Courses	15
Technical Illustration Specialty (27 Credits)	ART 111	Drawing for Visualization	3
	ART 114	Graphic Design	3
	VIS 101	Fundamentals of Design	3
	VIS 115	Introduction to Computer Graphics	3
		Locally Determined Courses	15

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Design Technology

Associate of Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	28
Technical Core	27
Specialty Core	9
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Mechanical Technology program

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 131	Algebra/Trigonometry I	3
	MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	***	Humanities/Social Sciences Elective	9
Technical	DCT 202	CAD Programming Language	3
	DSN 103	CAD Fundamentals	3
	DSN 106	Descriptive Geometry	3
	DSN 220	Advanced CAD	3
	DSN 221	Statics	3
	DSN 222	Strength of Materials	3
Choose 3 Courses Within One of the Following Specialties	IDS 104	Fluid Power Basics	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
Architecture Specialty (Choose 9 credits)	DCT 105	Facilities Design and Layout	3
	DCT 109	Construction Materials and Specifications	3
	DCT 204	Architectural CAD	3
	DCT 208	Structural Detailing	3
CAD/CAM Specialty (Choose 9 credits)	MTT 208	CNC Programming I	3
	MTT 220	CAD/CAM I	3
	MTT 221	CAD/CAM II	3
	TEC 101	Manufacturing Processes	3
Mechanical Specialty (Choose 9 Credits)	DCT 104	Product Drafting	3
	DCT 202	CAD Programming Language	3
	DCT 217	Product Design	3
	TEC 101	Manufacturing Processes	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

*** Elective from courses that transfer to Indiana State.

Design Technology

Technical Certificate

To earn this degree, you must have 33 credits in the following areas:

General Education Core	6
Technical Core	9
Specialty Core	N/A
Locally Determined Courses	18

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	**	General Education Course	3
Technical	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
	DSN 103	CAD Fundamentals	3

Choose One of the Following Specialties

Courses required to fulfill specialty areas for the Technical Certificate are determined by the local campuses. The following specialties are available, but you should check with an admissions counselor to ensure that the specialty of interest to you is available at the campus of your choice.

- Architecture Specialty (18 credits)
- Civil Specialty (18 credits)
- CAD/CAM Specialty (18 credits)
- HVAC Design Specialty (18 credits)
- Mechanical Specialty (18 Credits)

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Electronics Technology

Program Description

The Electronics Technology program is designed to meet the ongoing needs of business, industry and the student. The Associate of Applied Science and the Associate of Science degrees are structured to develop the technical skills, general knowledge, and critical thinking and problem solving abilities of graduates. Broad-based technical skills and critical thinking processes assist the student in adapting to changes in the work environment and allow advancement in the field.

Associate of applied science degrees require 65 credits. Specialties include automation controls, biomedical, communications, computer systems/networking, electrical maintenance, electronics, industrial, instrumentation, laser/electro-optics, and telecommunications. Electronics students wishing to pursue a bachelor of science degree in Electronics Technology at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Electronics Technology. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU. A technical certificate and career development certificates are available. Programs are offered in Gary, East Chicago, Valparaiso, Elkhart, South Bend, Fort Wayne, Kokomo, Logansport, Muncie, Marion, Anderson, Terre Haute, Indianapolis, Richmond, Bloomington, Columbus, Madison, Evansville and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Electronics program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (65 Credits)*
- *Associate of Science (64 Credits)*

Specialties Offered:

- *Automation Controls*
- *Biomedical*
- *Communications*
- *Computer Systems/Networking*
- *Electrical Maintenance*
- *Electronics*
- *Industrial*
- *Instrumentation*
- *Laser/Electro-Optics*
- *Telecommunications*

Program Available at:

Anderson
Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Logansport
Madison
Marion
Muncie
Richmond
Sellersburg
South Bend
Terre Haute
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Electronics Technology

Associate of Applied Science

To earn this degree, you must have 65 credits in the following areas:

General Education Core	19
Technical Core	34
Specialty Core	0-6
Locally Determined Courses	6-12

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 131	Algebra/Trigonometry I } AND	3
	MAT 132	Algebra/Trigonometry II } AND	3
		OR	
	**MAT 133	College Algebra } AND	4
	MAT 134	Trigonometry } AND	2
	PHY 101	Physics I	4
	*	Humanities/Social Sciences Elective	3
Technical	ELT 120	Introduction to Electronics	3
	ELT 121	Circuits I	3
	ELT 122	Circuits II	3
	ELT 124	Digital I	3
	ELT 125	Digital II	3
	ELT 126	Solid State I	3
	ELT 221	Solid State II	3
	ELT 222	Microprocessors	3
	ELT 224	Linear Integrated Circuit Applications	3
	^ELT 234	Advanced Problem Solving	3
	TEC 103	Collaborative Team Skills	1
	TEC 104	Computer Fundamentals for Technology	3
Choose One of the Following Specialties			
Automation Controls Specialty (12 credits)	AMT 102	Introduction to Robotics	3
	AMT 201	Manufacturing Systems Control	3
		Locally Determined Courses	6

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Electronics Technology

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
Biomedical Specialty (12 Credits)	ELT 219	Biomedical Electronics I	3
	ELT 220	Biomedical Electronics II	3
		Locally Determined Courses	6
Communications Specialty (12 Credits)	ELT 228	Communications Electronics	3
	ELT 230	Advanced Communications Electronics	3
		Locally Determined Courses	6
Computer Systems/ Networking Specialty (12 credits)	ELT 212	Networking	3
	ELT 226	Computer Troubleshooting	3
		Locally Determined Courses	6
ctrical Maintenance Specialty (12 credits)	ELT 233	Industrial Motors and Controls	3
	ELT 238	Process Instrumentation	3
		Locally Determined Courses	6
Electronics Specialty (12 Credits)		Locally Determined Courses	12
Industrial Specialty (12 Credits)	AMT 201	Manufacturing Systems Control	3
	ELT 223	Electrical Machines	3
		Locally Determined Courses	6
Instrumentation Specialty (12 Credits)	ELT 235	Process Control	3
	ELT 237	Calibration	3
		Locally Determined Courses	6
Laser/Electro-Optics Specialty (12 credits)	ELT 128	Introduction to Lasers	3
	ELT 130	Fiber Optics	3
		Locally Determined Courses	6
Telecommunications Specialty (12 credits)	ELT 130	Fiber Optics	3
	ELT 229	Telecommunications	3
		Locally Determined Courses	6

Electronics Technology

Associate of Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	31
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Electronics Technology program

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 131	Algebra/Trigonometry I	3
	MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	*	Humanities/Social Sciences Elective	12
Technical	ELT 120	Introduction to Electronics	3
	ELT 121	Circuits I	3
	ELT 122	Circuits II	3
	ELT 124	Digital I	3
	ELT 125	Digital II	3
	ELT 126	Solid State I	3
	ELT 221	Solid State II	3
	ELT 222	Microprocessors	3
	IDS 104	Fluid Power Basics	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Industrial Technology

Program Description

The Industrial Technology program is a discipline devoted to the development of skills necessary for the installation, operation and maintenance of industrial equipment and systems. The curriculum is broad-based and offers a number of specialties, but focuses on the integration of each area as used in systemic applications. This requires proficiency in mathematics, communication, physics, and basic computer skills as well as technical subject matter.

In laboratory applications of classroom study each student uses the tools and instruments associated with the practice of the industrial technology specialty including volt-ohm meters, leak detectors, sonic diagnostic tools, pressure and level testing devices, preventive maintenance software programs, welding and brazing equipment, metallurgical testing instruments, hand tools, and electronic and hand precision measuring devices. Safety equipment and the safe use of tools and materials are integrated into each course in the curriculum.

Associate of applied science degrees require 61-68 credits. Specialties are available in heating, ventilation and air conditioning, industrial maintenance, machine tool, mechanical maintenance, and welding. Technical certificates and career development certificates are available. Programs are offered in Gary, East Chicago, Valparaiso, Elkhart, South Bend, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Anderson, Terre Haute, Indianapolis, Richmond, Bloomington, Columbus, Madison, Lawrenceburg, Evansville, Tell City and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Industrial Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (61-68 Credits)*
- *Technical Certificate (39 Credits)*

Specialties Offered:

- *Heating, Ventilation, and Air Conditioning*
- *Industrial Maintenance*
- *Machine Tool*
- *Mechanical Maintenance*
- *Welding*

Program Available at:

Anderson
Bloomington
Columbus
East Chicago
Elkhart
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Lawrenceburg
Logansport
Madison
Muncie
Richmond
Sellersburg
South Bend
Tell City
Terre Haute
Valparaiso

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Industrial Technology

Associate of Applied Science

To earn this degree, you must have 61-68 credits in the following areas:

General Education Core	19
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	12-16

You Must Have		Required Courses	Credit Hours
General Education	**COM	Communications Course	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	MAT 121	Geometry/Trigonometry	3
	PHY 100	Technical Physics	4
	*	Humanities/Social Sciences Elective	3
Technical	IDS 102	Introduction to Print Reading	3
	IDS 103	Motors and Motor Controls	3
	IDS 114	Introductory Welding	3
	QSC 101	Quality Control Concepts and Techniques I	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 113	Basic Electricity	3
Choose One of the Following Specialties			
Heating, Ventilation, and Air Conditioning Specialty (27 credits)	HEA 101	Heating Fundamentals	3
	HEA 103	Refrigeration I	3
	HEA 104	Heating Service	3
	HEA 106	Refrigeration II	3
	HEA 202	Electrical Circuits and Controls	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Industrial Technology

Associate of Applied Science—Specialties

	Required Courses		Credit Hours
DUSTRIAL MAINTENANCE SPECIALTY (27-28 CREDITS)	AMT 201	Manufacturing Systems Control	3
	IDS 104	Fluid Power Basics	3
	IMT 201	Fluid Power Systems	3
	IMT 203	Machine Maintenance/Installation	3
	IMT 207	Electrical Circuits	3
		Locally Determined Courses	12-13
ACHINE TOOL SPECIALTY (27 CREDITS)	MTT 106	Advanced Print Interpretation	3
	MTT 110	Turning and Milling Processes	3
	MTT 204	Abrasive Processes I	3
	TEC 101	Manufacturing Processes	3
	WLD 120	Metallurgy Fundamentals	3
		Locally Determined Courses	12
MECHANICAL MAINTENANCE SPECIALTY (31 CREDITS)	IDS 104	Fluid Power Basics	3
	IMT 201	Fluid Power Systems	3
	IMT 203	Machine Maintenance	3
	IMT 211	Advanced Industrial Mechanics I	3
	MTT 101	Introduction to Machining	3
		Locally Determined Courses	16
WELDING SPECIALTY (24 CREDITS)	WLD 100	Welding Processes	3
	WLD 120	Metallurgy Fundamentals	3
	WLD 205	Welding Codes and Testing	3
	WLD 207	Gas Metal Arc (MIG) Welding	3
		Locally Determined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Industrial Technology

Technical Certificate

To earn this degree, you must have 39 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	24

You Must Have		Required Courses	Credit Hours
General Education	**COM 102	Introduction to Interpersonal Communication	3
		OR	
	**ENG 111	English Composition	3
	*	General Education Elective	3
Technical	TEC 113	Basic Electricity	3
Choose One Specialty			
Heating, Ventilation, & Air Conditioning Specialty (30 credits)	HEA 101	Heating Fundamentals	3
	HEA 103	Refrigeration I	3
		Locally Determined Courses	24
Industrial Maintenance Specialty (30 credits)	IDS 102	Introduction to Print Reading	3
	IDS 104	Fluid Power Basics	3
		Locally Determined Courses	24
Machine Tool Specialty (30 credits)	MTT 110	Turning and Milling Processes	3
	TEC 101	Manufacturing Processes	3
		Locally Determined Courses	24
Welding Specialty (30 credits)	WLD 108	Shielded Metal Arc Welding I	3
	WLD 207	Gas Metal Arc (MIG) Welding	3
		Locally Determined Courses	24

College/Industry Job Title Training

Program Description

The College/Industry Job Title Training program provides a linkage between Ivy Tech and business and industry. The program is designed for students who presently have a job and are seeking to improve their skills, marketability, and promotability. Students are provided with a combination of academic instruction and specific skill training at the job site, structured around the student's and the employer's needs. Students may receive credit for a portion of their work experience. A Technical Certificate is awarded following completion. The program is conducted through the College's Business and Industry Training department and interested students should contact this office. The program is offered in Terre Haute.

Degrees Available:

- *Technical Certificate (30 Credits)*

Specialties Offered:

None

Program Available at:

Terre Haute

Technical Certificate

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

You Must Have	Required Courses		Credit Hours
General Education	COM 102	Introduction to Interpersonal Communications	3
		OR	
	ENG 111	English Composition	3
	*	General Education Elective	3
Technical	TEC 104	Computer Fundamentals for Technology	3
Specialty (21 credits)	Specialty courses are determined locally, based upon the local training focus. These courses must be taken in addition to other locally determined courses.		

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Manufacturing Technology

Program Description

The Manufacturing Technology program is a multi-disciplinary program designed to prepare students for technician-level positions. Specialty areas allow students to choose an emphasis in plastics, quality assurance, computer-integrated manufacturing, computer-aided design/computer aided manufacturing, computer numerical control or welding. Graduates are prepared to perform many facets of manufacturing including set-up, troubleshooting, processing and quality control.

Skills are acquired through lectures, demonstrations and hands-on experiences. Lab activities include the use of modern equipment and techniques currently found in industry. This training provides a foundation for any graduate to enter the workforce and continue skill enhancement.

Associate of applied science degrees require 61-64 credits. Manufacturing Technology students wishing to pursue a bachelor of science in Manufacturing Technology or bachelor of science in Computer Integrated Manufacturing at Indiana State University and enter as a junior-year student may complete the associate of science degree program in Manufacturing Technology. Students should choose the appropriate associate of science curriculum for their baccalaureate goal in manufacturing. Students completing the associate of science program will also be able to enter the workforce, as well as to transfer to ISU. Technical certificates and career development certificates also are available. Programs are offered in Gary, South Bend, Fort Wayne, Lafayette, Kokomo, Logansport, Muncie, Terre Haute, Indianapolis, Richmond, Columbus, Madison, Evansville and Sellersburg. The availability of specialties and degrees will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Manufacturing Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available

- *Associate of Applied Science (61-64 Cred*
- *Associate of Science–Manufacturing Technology (69 Cred*
- *Associate of Science–Computer Integrated Manufacturing (63 Credits)*
- *Technical Certificate (30 Credits)*

Specialties Offered

- *Computer-Aided Des & Manufacturing*
- *Computer Integrated Manufacturing*
- *Computer Numerica Control*
- *Plastics*
- *Quality Assurance*
- *Welding*

Program Available at:

Columbus
Evansville
Fort Wayne
Gary
Indianapolis
Kokomo
Lafayette
Logansport
Madison
Muncie
Richmond
Sellersburg
South Bend
Terre Haute

Availability of specialti and degrees varies by campus. Contact you local campus for more information. See page for contact information

Manufacturing Technology

Associate of Applied Science

To earn this degree, you must have 61-64 credits in the following areas:

General Education Core	19
Technical Core	18
Specialty Core	12-15
Locally Determined Courses	12

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	*MAT 111	Intermediate Algebra	3
		OR	
	*MAT 131	Algebra/Trigonometry I	3
	*MAT 121	Geometry/Trigonometry	3
		OR	
	*MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	*	Humanities/Social Sciences Elective	3
Technical	IDS 104	Fluid Power Basics	3
	QSC 101	Quality Control Concepts and Techniques I	3
	TEC 101	Manufacturing Processes	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 113	Basic Electricity	3
Choose One of the Following Specialties			
CAD/CAM Specialty (27 credits)	DSN 103	CAD Fundamentals	3
	MTT 106	Advanced Print Interpretation	3
	MTT 208	CNC Programming I	3
	MTT 220	CAD/CAM I	3
	MTT 221	CAD/CAM II	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Manufacturing Technology

Associate of Applied Science—Specialties

		Required Courses	Credit Hours
CIM Specialty (27 credits)	AMT 102	Introduction to Robotics	3
	AMT 201	Manufacturing Systems Control	3
	AMT 202	Work Cell Design and Integration	3
	AMT 203	Automation Electronics	3
	AMT 205	Automated Manufacturing Systems	3
		Locally Determined Courses	12
CNC Specialty (27 credits)	MTT 106	Advanced Print Interpretation	3
	MTT 208	CNC Programming I	3
	MTT 209	CNC Programming II	3
	MTT 210	Interactive CNC	3
	MTT 211	Advanced Programming Techniques	3
		Locally Determined Courses	12
Plastics Specialty (27 credits)	PMT 101	Introduction to Plastics	3
	PMT 106	Introduction to Polymer Science	3
	PMT 107	Injection Molding	3
	PMT 108	Extrusion Processes	3
	PMT 209	Manufacturing of Plastic Products	3
		Locally Determined Courses	12
Quality Assurance Specialty (24 credits)	QSC 102	Statistical Process Control	3
	QSC 201	Advanced Statistical Process Control	3
	QSC 202	Quality Control Concepts and Techniques II	3
	QSC 204	Total Quality Management	3
		Locally Determined Courses	12
Welding Specialty (24 credits)	WLD 100	Welding Processes	3
	WLD 120	Metallurgy Fundamentals	3
	WLD 205	Welding Codes, Specifications, and Estimating	3
	WLD 207	Gas Metal Arc (MIG) Welding	3
		Locally Determined Courses	12

Manufacturing Technology

Associate of Science—Manufacturing Technology

To earn this degree, you must have 61 credits in the following areas:

General Education Core	31
Technical Core	30
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Manufacturing Technology program

You Must Have	Required Courses		Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 131	Algebra/Trigonometry I	3
	MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	***	Humanities/Social Sciences Electives	12
Technical	DSN 103	CAD Fundamentals	3
	ELT 121	Circuits I	3
	ELT 122	Circuits II	3
	IDS 104	Fluid Power Basics	3
	QSC 101	Quality Control Concepts and Techniques I	3
	TEC 101	Manufacturing Processes	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3
	*	Manufacturing Electives	6

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

*** Electives from courses that transfer to ISU

Manufacturing Technology

Associate of Science—Computer Integrated Manufacturing

To earn this degree, you must have 61 credits in the following areas:

General Education Core	28
Technical Core	33
Specialty Core	N/A
Locally Determined Courses	N/A

Curriculum designed for transfer to Indiana State University's BS in Computer Integrated Manufacturing program

You Must Have	Required Courses		Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	ENG 211	Technical Writing	3
	MAT 131	Algebra/Trigonometry I	3
	MAT 132	Algebra/Trigonometry II	3
	PHY 101	Physics I	4
	***	Humanities/Social Sciences Electives	9
Technical	AMT 102	Introduction to Robotics	3
	AMT 202	Work Cell Design and Integration	3
	AMT 203	Automation Electronics	3
	AMT 205	Automated Manufacturing Systems	3
	ELT 121	Circuits I	3
	ELT 122	Circuits II	3
	IDS 104	Fluid Power Basics	3
	TEC 101	Manufacturing Processes	3
	QSC 101	Quality Control Concepts and Techniques	3
	TEC 102	Technical Graphics	3
	TEC 104	Computer Fundamentals for Technology	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

*** Elective from those courses that transfer to ISU.

Manufacturing Technology

Technical Certificate

o earn this degree, ou must have 0-39 credits in the llowing areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15-24

You Must Have		Required Courses	Credit Hours
General Education	COM 102	Introduction to Interpersonal Communication	3
		OR	
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
Technical	TEC 104	Computer Fundamentals for Technology	3
Choose One of the llowing Specialties			
CAD/CAM Specialty (21 credits)	MTT 110	Turning and Milling Processes	3
	TEC 101	Manufacturing Processes	3
		Locally Determined Courses	15
CNC Specialty (30 credits)	MTT 208	CNC Programming I	3
	MTT 209	CNC Programming II	3
		Locally Determined Courses	24
Plastics-Extrusion Molding Specialty (21 credits)	PMT 101	Introduction to Plastics	3
	PMT 108	Extrusion Processes	3
		Locally Determined Courses	15
Plastics-Injection Molding Specialty (21 credits)	PMT 101	Introduction to Plastics	3
	PMT 107	Injection Molding	3
		Locally Determined Courses	15

Public Safety Technology

Program Description

The Public Safety Technology program is designed to meet the ongoing needs of municipalities, students, businesses and industries. The program develops technical skills, general knowledge, critical thinking and problem solving abilities of students. Broad-based technical skills and critical thinking processes assist students in adapting to changes in the work environment and promoting successful advancement on the job.

Specialty areas allow students to choose an emphasis in environmental care, fire science, hazardous materials or public administration. Associate of applied science degrees require 60-63 credits. Technical certificates and career development certificates are available. The Public Safety Technology program is offered in Gary, Fort Wayne, Terre Haute, and Indianapolis. The availability of associate of applied science specialties and technical certificates will vary from campus to campus. Interested students should contact local Ivy Tech campuses. Students graduating from the Public Safety Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available

- *Associate of Applied Science (60-63 Cred*
- *Technical Certificate (30 Credits)*

Specialties Offered

- *Environmental Care*
- *Fire Science*
- *Hazardous Material*
- *Public Administratio*

Program Available at:

Fort Wayne
Gary
Indianapolis
Terre Haute

Availability of specialti and degrees varies by campus. Contact you local campus for more information. See page for contact information

Public Safety Technology

Associate of Applied Science

To earn this degree, you must have 60-63 credits in the following areas:

General Education Core	18
Technical Core	15
Specialty Core	12-15
Locally Determined Courses	12-15

You Must Have		Required Courses	Credit Hours
General Education	**CHM 101	Chemistry I	3
		OR	
	** SCI 111	Physical Science	3
	**COM 101	Fundamentals of Public Speaking	3
		OR	
	**COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	MAT 111	Intermediate Algebra	3
	POL 101	Introduction to American Government and Politics	3
	**	General Education Course	3
Technical	PST 121	Risk Management	3
	PST 220	Incident Management Systems	3
	PST 221	Computer Design and Planning	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 106	Hazardous Materials and Conditions	3
Choose One of the ollowing Specialties			
Environmental Care Specialty (27 Credits)	ENV 101	Introduction to Environmental Technology	3
	ENV 102	Environmental Management	3
	ENV 103	Environmental Chemistry	3
	HMT 104	Environmental Toxicology	3
	HMT 200	Environmental Protection Agency (EPA) Regulations	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Public Safety Technology

Associate of Applied Science—Specialties

Fire Science Specialty (30 Credits)

AFS 102	Fire Apparatus and Equipment	3
AFS 103	Firefighting Strategy and Tactics	3
AFS 201	Fire Protection Systems	3
^AFS 202	Fire Service Management	3
AFS 204	Fire Service Hydraulics	3
	Locally Determined Courses	15

Hazardous Materials Specialty (27 Credits)

HMT 100	Occupational Safety and Health (OSHA) Regulations	3
HMT 120	Hazard Communication Standard	3
HMT 200	Environmental Protection Agency (EPA) Regulations	3
HMT 220	Hazardous Materials Recovery, Incineration, and Disposal	3
	Locally Determined Courses	15

Public Administration Specialty (27 credits)

BUS 105	Principles of Management	3
BUS 208	Organizational Behavior	3
OPM 102	Techniques of Supervision I	3
OPM 224	Operations Management	3
	Locally Determined Courses	15

Public Safety Technology

Technical Certificate—Fire Science

To earn this degree, you must have 30 credits in the following areas:

General Education Core	6
Technical Core	3
Specialty Core	6
Locally Determined Courses	15

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	POL 111	Introduction to American Government and Politics	3
Technical	TEC 104	Computer Fundamentals for Technology	3
Other Required Courses	AFS 103	Strategy and Tactics	3
	AFS 201	Fire Protection Systems	3
		Regionally Determined Courses	15

Quality Science

Program Description

The Quality Science program is competency-based and is designed to meet the ongoing needs of business, industry and the student. The program develops technical skills, general knowledge, and critical thinking and problem solving abilities of program graduates. The program is based upon the latest technology available and makes extensive use of the laboratory to complete the theory-to-practice cycle. Broad-based technical skills and critical thinking processes assist the student in adapting to changes in the work environment and allow advancement in the field.

Associate of applied science degrees require 64 credit hours in Quality Science. Specialties may be pursued in industrial laboratory and quality management. The program is offered in Terre Haute. Students graduating from the Quality Science program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (64 Credits)*

Specialties Offered:

- *Industrial Laboratory*
- *Quality Management*

Program Available at:

Terre Haute

Quality Science

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	22
Technical Core	18
Specialty Core	12
Locally Determined Courses	12

You Must Have	Required Courses		Credit Hours
General Education	CHM 101	Chemistry I	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	MAT 115	Statistics	3
	MAT 131	Algebra/Trigonometry I	3
	PHY 100	Technical Physics	4
	*	Humanities/Social Sciences Elective	3
Technical	QSC 101	Quality Control Concepts and Techniques I	3
	QSC 102	Statistical Process Control	3
	^QSC 204	Total Quality Management	3
	TEC 101	Manufacturing Processes	3
	TEC 104	Computer Fundamentals for Technology	3
	TEC 106	Hazardous Materials and Control	3
Choose One of the ollowing Specialties			
Industrial Laboratory Specialty (24 credits)	CHM 102	Chemistry II	3
	ILT 101	Industrial Laboratory Techniques	3
	ILT 201	Industrial Instrumentation and Techniques I	3
	ILT 202	Industrial Instrumentation and Techniques II	3
		Locally Determined Courses	12
Quality Management Specialty (24 Credits)	IDS 102	Introduction to Print Reading	3
	QSC 201	Advanced Statistical Process Control	3
	QSC 202	Quality Control Concepts and Techniques II	3
	QSC 203	Metrology	3
		Locally Dertermined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Recreational Vehicle Service Technolog

Program Description

The Recreational Vehicle Service program prepares students for the field of recreational vehicle repair and service. Graduates are employed as technicians who provide all general maintenance on appliances, chassis, and body; install accessories; and repair structural damage. Industry contact is developed and maintained through the required internship program. Ivy Tech/Elkhart is one of nine sites nationwide approved by the Recreational Vehicle Industry Association (RVIA) to offer the program.

An associate of applied science degree and a technical certificate are offered in Elkhart. Students graduating from the Recreational Vehicle Service Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (64 Credits)*
- *Technical Certificate (46 Credits)*

Specialties Offered

None

Program Available at:

Elkhart

Recreational Vehicle Service Technology

Associate of Applied Science

To earn this degree, you must have 64 credits in the following areas:

General Education Core	18
Technical Core	40
Other Required Courses	6
Locally Determined Courses	N/A

You Must Have	Required Courses		Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	COM 102	Introduction to Interpersonal Communication	3
	ENG 111	English Composition	3
	MAT 112	Functional Mathematics	3
	*	Life/Physical Sciences Elective	3
	*	Social Sciences/Humanities Elective	3
Technical	RVT 101	Introduction to RV Service/Customer Relations	2
	RVT 102	Electrical Concepts	3
	RVT 103	Fluid Power, Heat, and Mechanical Systems	4
	RVT 104	LP Gas	2
	RVT 105	Electrical Systems Service	5
	RVT 106	RV Braking, Suspension, and Towing Systems	3
	RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
	RVT 108	Heating Systems/Accessory Installation, and Service	3
	RVT 109	Water Systems and Water Heating	2
	RVT 110	Interior Coach	3
	RVT 111	Exterior Coach	4
	RVT 201	Metal Processing and Metallurgy	2
	TEC 104	Computer Fundamentals for Technology	3
Other Required Courses	RVT 220	Recreational Vehicle Retailing	3
	^RVT 280	Co-op/Internship	3

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

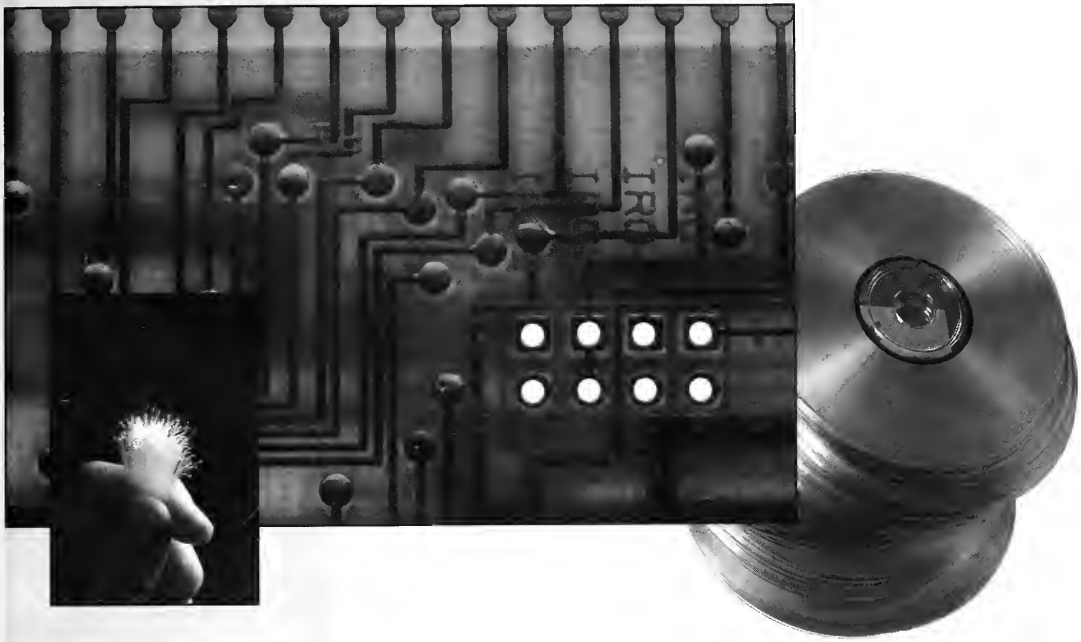
Recreational Vehicle Service Technology

Technical Certificate

To earn this degree, you must have 46 credits in the following areas:

General Education Core	6
Technical Core	40
Specialty Core	N/A
Locally Determined Courses	N/A

You Must Have		Required Courses	Credit Hours
General Education	ENG 111	English Composition	3
	MAT 112	Functional Mathematics	3
Technical	RVT 101	Introduction to RV Service/Customer Relations	2
	RVT 102	Electrical Concepts	3
	RVT 103	Fluid Power, Heat, and Mechanical Systems	4
	RVT 104	LP Gas	2
	RVT 105	Electrical Systems Service	5
	RVT 106	RV Braking, Suspension, and Towing Systems	3
	RVT 107	RV Air Conditioning and Absorption Refrigeration Service	4
	RVT 108	Heating Systems/Accessory Installation and Service	3
	RVT 109	Water Systems and Water Heating	2
	RVT 110	Interior Coach	3
	RVT 111	Exterior Coach	4
	RVT 201	Metal Processing and Metallurgy	2
	TEC 104	Computer Fundamentals for Technology	3



Visual Technologies

Ivy Tech State College offers associate of science and associate of applied science degrees in the areas of interior design, video technology and visual communications. Within the Visual Communications program, specialty areas are offered in graphic design, graphic media production, multimedia, and photography.

Students entering the Visual Technologies Division are exposed to a broad technical core of courses which represent key topics such as organizing the visual field, color theory and applications, image input technology, the computer as a powerful design and image manipulation tool, the professional visual artist as a business person and the exit portfolio.

Ivy Tech's Visual Technologies Division strives for a continuous interaction between students and industries through the jury evaluation system, guest speakers, field trips, advisory committees and field experience opportunities.

Interior Design

Program Description

The Interior Design program prepares students for careers by providing the experiences and competencies in research techniques, problem solving and presentation skills necessary to meet today's professional interior design standards.

Structured courses in spatial relationships and organization, environmental issues, human factors, safety and barrier-free guidelines, and project management are incorporated into competent and creative project solutions. These project solutions include residential and contract design case studies using state-of-the-art technologies.

Connecting students to potential employers is accomplished through supervised design projects for community service organizations, related class field trips and projects juried by area professionals. Field study opportunities also are provided which allow students to experience first-hand the daily operations and organization of a successful interior design firm. The culmination of student activity is the completion of an individual exit portfolio and resume which demonstrate the skills and knowledge of the interior design graduate. This portfolio is the primary tool used in job-seeking efforts.

The two-year program requiring 66 semester hours culminates with an associate of applied science degree. Programs are offered at South Bend and Evansville. Entry portfolios will be reviewed for basic drafting, design and drawing skills. Students graduating from the Interior Design program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (66 Credits)*

Specialties Offered:

None

Program Available at:

Evansville
South Bend

Interior Design

Associate of Applied Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	18

You Must Have		Required Courses	Credit Hours
General Education	ARH 101	Survey of Art and Culture I	3
	ARH 102	Survey of Art and Culture II	3
	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT111	Intermediate Algebra	3
	SCI 111	Physical Science	3
Technical	VIS 101	Fundamentals of Design	3
	INT 102	Building Systems I	3
	INT 103	Introduction to Interior Design	3
	INT 106	Building Systems II	3
	INT 108	Interior Design II	3
	INT 216	CAD for Interior Design	3
Other Required Courses	INT 109	History of Interiors I	3
	INT 201	Interior Finishes	3
	INT 203	Professional Practices	3
	INT 219	Special Projects/Portfolio Preparation	3
		Locally Determined Courses	18

Key (See page **2** for definitions)

* Elective ** Locally Determined ^ Capstone Course

Video Technology

Program Description

The Video Technology program prepares students for professional careers in the visual communications field. The program reflects the visual communications industry needs and standards by providing experiences in research, problem solving and hands-on procedures in video and multi-media program production.

Students learn to create scripts and storyboards, develop a budget and produce a project budget based on client needs. In video production, students learn to use professional cameras, direct the production and supervise production personnel. Students gain experience in studio and remote location techniques. Post-production activities include audio dubbing, voice-over narration, digital-imaging, editing, computer graphics, animation and special effects. Students learn techniques in audio recording, mixing and electronic audio enhancement using both analog and digital systems. Students also learn techniques in 35mm photography and presentation technology.

The faculty bring to the classroom the knowledge and procedures they gain through their professional activities and industry associations. Students may elect to do an externship at an area studio. All students produce an exit portfolio which demonstrates the quality and scope of their knowledge and skills.

The associate of applied science degree in video technology requires 66 credits for completion. The program is offered at South Bend. Students graduating from the Video Technology program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (66 Credits)*

Specialties Offered:

None

Program Available at:

South Bend

Video Technology

Associate of Applied Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	18
Technical Core	18
Other Required Courses	12
Locally Determined Courses	18

You Must Have		Required Courses	Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	SCI 111	Physical Science	3
	**	Humanities/Art History Survey I Course	3
	**	Humanities/Art History Survey II Course	3
Technical	VID 101	Audio/Video Systems Theory	3
	VID 104	Studio I	3
	VID 105	Video Production I	3
	VIS 101	Fundamentals of Design	3
	VIS 102	Fundamentals of Imaging	3
	VIS 207	Portfolio Preparation	3
Other Required Courses	VID 102	Media Technology	3
	VID 106	Production Planning	3
	VID107	Video Production II	3
	VID 109	Studio II	3
		Locally Determined Courses	18

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Visual Communications

Program Description

Students entering the Visual Communications program are exposed to a broad technical core of courses representing key topics such as organizing the visual field, color theory and application, image acquisition and manipulation technology, the computer as a powerful tool, the professional visual artist as a business person and the exit portfolio.

The program offers an associate of applied science degree with specialties in the areas of graphic design, graphic media production, multimedia, and photography. Associate of applied science degrees are offered in South Bend, Terre Haute, Columbus, Evansville, and Sellersburg. An associate of science degree is offered at the Ivy Tech campus in Evansville. Students graduating from the Visual Communications program participate in evaluations of proficiency in general and technical education.

Degrees Available:

- *Associate of Applied Science (66 Credits)*

Specialties Offered:

- *Graphic Design*
- *Graphic Media Production*
- *Multimedia*
- *Photography*

Program Available at:

Columbus
Evansville
Sellersburg
South Bend
Terre Haute

Availability of specialties and degrees varies by campus. Contact your local campus for more information. See page 6 for contact information.

Visual Communications

Associate of Applied Science

To earn this degree, you must have 66 credits in the following areas:

General Education Core	18
Technical Core	18
Specialty Core	12-18
Locally Determined Courses	12-18

You Must Have	Required Courses		Credit Hours
General Education	COM 101	Fundamentals of Public Speaking	3
	ENG 111	English Composition	3
	**MAT 112	Functional Mathematics	3
		OR	
	**MAT 111	Intermediate Algebra	3
	SCI 111	Physical Science	3
	**	Humanities/Social Sciences Course	3
	**	Humanities/Social Sciences Course	3
Technical	VIS 101	Fundamentals of Design	3
	VIS 102	Fundamentals of Imaging	3
	VIS 115	Computer Graphics	3
	VIS 201	Electronic Imaging	3
	VIS 205	Business Practices for Visual Artists	3
	VIS 207	Portfolio Preparation	3

Choose One of the ollowing Specialties

Graphic Design Specialty (30 credits)	ART 111	Drawing for Visualization	3
	ART 112	Electronic Layout	3
	ART 114	Graphic Design	3
	ART 115	Typography	3
	ART 117	Production	3
	ART 217	Advanced Graphic Design	3
		Locally Determined Courses	12

Specialties Continued Next Page

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

Visual Communications

Associate of Applied Science—Specialties

	Required Courses		Credit Hours
Graphic Media Production Specialty (30 Credits)	GRA 102	Introduction to Machine Printing	3
	GRA 106	Introduction to Color Printing	3
	GRA 201	Photomechanical Reproduction	3
	GRA 202	Science of Color	3
		Locally Determined Courses	18
Multimedia Specialty (30 Credits)	ART 115	Typography	3
	ART 116	Electronic Illustration	3
	PHO 106	Studio Practices	3
	VIS 103	Introduction to Multimedia	3
	VIS 105	Video and Sound I	3
	VIS 209	3D Rendering and Animation	3
		Locally Determined Courses	12
Photography Specialty (30 Credits)	PHO 104	Basic Photography	3
	PHO 106	Studio Practices	3
	PHO 107	Intermediate Photography	3
	PHO 109	Studio Lighting Techniques	3
	PHO 201	Principles of Color Photography	3
	PHO 204	Commercial Photography Techniques I	3
		Locally Determined Courses	12

Key (See page 2 for definitions)

* Elective ** Locally Determined ^ Capstone Course

General Education and Support Services

The primary function of the General Education and Support Services (GESS) Division is to provide courses that add to the breadth of knowledge that each student should gain from the college experience, regardless of his or her program. General education courses at Ivy Tech are appropriate for the community-based, technical college mission and complement the depth of knowledge gained from the technical courses which are part of the academic programs. The College believes that each graduate should achieve a certain body of knowledge, held in common with all educated people.

General education courses cover a range of subjects, including communications (written and oral), social sciences (psychology, sociology, economics, political science), humanities (American history, art history, ethics, philosophy), mathematics (from college-level survey math through calculus), and life and physical sciences (physical science survey, physics, anatomy, physiology, chemistry, biology, microbiology).

Basic skills advancement coursework includes English as a second language, language arts (spelling, writing, reading, vocabulary building), mathematics (mathematics and basic algebra), life and physical sciences (prep/science literacy courses in chemistry and the life sciences), and college orientation (college skills, critical thinking, computer literacy and basic keyboarding). In addition to these courses, campuses may provide regionally determined courses to meet unique local needs. Many basic skills advancement programs provide basic skills assessment, one-on-one tutoring, multimedia, technology-based and individualized instruction, special needs counseling and other services in addition to courseware.

The General Technical Studies (GTS) certificate program provides opportunities for students who may not be ready to enter a degree program due to lack of preparation or other reasons. GTS helps these students define and meet their educational objectives. GTS serves students who may be in need of correcting deficient academic skills before enrolling in a technical degree program, have yet to decide upon pursuing a specific course of study, are seeking admission into one of the college's selective programs, wish to examine an occupational program, are in need of a career-oriented educational exploration, or are in need of an educational foundation for a related one- or two-year program and wish to pursue a one-year program of general technical studies. The GTS program is available at all 22 campuses. Interested students should contact their local campus and ask for the regional specifications of the GTS curriculum.

General Education Courses

Communications

ENG 111 English Composition **3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100). Provides a foundation in rhetorical principles, communication strategies and inquiry processes that can be successfully applied in personal, academic or professional writing situations. Initiates and integrates the composing process with critical reading and thinking.

ENG 112 Exposition and Persuasion **3 Credits**

Prerequisites: ENG 111 - English Composition. Builds on the writing skills taught in ENG 111 and emphasizes research-based analytic and persuasive writing. Requires students to complete other collaborative and individual projects.

ENG 211 Technical Writing **3 Credits**

Prerequisites: ENG 111 - English Composition. Builds on the writing skills taught in ENG 111. Requires students to prepare technical reports for various purposes using standard research techniques, documentation and formatting as appropriate. Requires students to demonstrate both written and oral competencies.

COM 101 Fundamentals of Public Speaking **3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, , 70-100 and COMPASS Reading, 80-100). Introduces fundamental concepts and skills for effective public speaking, including preparation and delivery of informative and persuasive presentations. Includes instruction in the use of visual aids and critical listening.

COM 102 Introduction to Interpersonal Communication **3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency through appropriate assessment (ASSET Writing and Reading sections, 41 or higher, COMPASS Writing, 70-100 and COMPASS Reading, 80-100). Focuses on the process of interpersonal communication as a dynamic and complex system of interactions. Stresses the importance of understanding and applying interpersonal communication theory in work, family and social relationships. Uses lecture/discussion format.

Social Sciences

ECN 101 Economics Fundamentals **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II and MAT 050 - Basic Algebra. Provides an introduction to the fundamentals of economics and their application to current economic problems.

ECN 201 Principles of Macroeconomics **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II and MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Develops a conceptual understanding of the forces affecting the level of national income, employment, interest rates and prices.

ECN 202 Principles of Microeconomics **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Develops an understanding of the process by which the market price mechanism allocates resources and influences individual behavior.

POL 101 Introduction to American Government and Politics **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II. Introduces the foundations, nature, and dynamics of American government and politics including constitutional foundations, civil liberties and civil rights, federalism, political parties, public opinion, interest groups, media, nominations, campaigns, elections, the presidency, the judiciary, congress, bureaucracies, and public policy.

PSY 101 Introduction to Psychology **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Provides a general survey of the science of psychology. Includes the study of research methodology, emotion, biological foundations, learning and cognition, perception, development, personality, abnormal psychology, and social psychology.

PSY 201 Lifespan Development **3 Credits**

Prerequisites: PSY 101 - Introduction to Psychology or SOC 111 - Introduction to Sociology. Covers human development from conception to death. Covers relevant research for each period.

PSY 205 Abnormal Psychology **3 Credits**

Prerequisites: PSY 101 - Introduction to Psychology. Examines theories and research related to mental illness as well as etiology, pathology, and treatment methods. Includes description of various disorders and personality problems.

SOC 111 Introduction to Sociology **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Introduces students to the science of human society, including fundamental concepts, descriptions, and analyses of society, culture, the socialization process, social institutions, and social change.

Humanities

ARH 101 Survey of Art and Culture I **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II. Surveys painting, sculpture and architectural styles of ancient Mediterranean cultures to the Renaissance period. Provides a foundation for the study of art history.

ARH 102 Survey of Art and Culture II **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II. Surveys painting, sculpture and architectural styles from the Renaissance through the 20th Century. Emphasizes developing analytical skills.

HSY 101 Survey of American History I **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II. Covers major themes and events in American history from the discovery era to the Civil War and Reconstruction.

HSY 102 Survey of American History II **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II. Covers major themes and events in American history from the Civil War and Reconstruction to the present.

PHL 101 Introduction to Philosophy **3 Credits**

Prerequisites: ENG 111 - English Composition. Examines fundamental questions of philosophy such as the foundations of morality, skepticism and knowledge, the nature of mind, free will and determinism, and the existence of God. Emphasizes the evaluation of arguments and analysis of concepts.

PHL 102 Introduction to Ethics **3 Credits**

Prerequisites: ENG 111 - English Composition. Examines major theories of ethics, theoretical issues, moral problems and issues, and our responsibility to future generations.

Mathematics

MAT 111 Intermediate Algebra **3 Credits**

Prerequisites: A scaled score of 40 or higher on the Elementary Algebra section of the ASSET assessment, or a COMPASS score of 41-65 on the Algebra section, or successful completion of MAT 050 - Basic Algebra. Reviews algebraic terminology and laws, basic operations with real numbers and polynomials, scientific notation, linear equations and graphs, and factoring algebraic expressions. Provides an in-depth study of rational expressions, systems of linear equations, radicals, radical equations, and quadratic equations. Introduces functions and function notation.

MAT 112 Functional Mathematics **3 Credits**

Prerequisites: A scaled score of 40 or higher on the Elementary Algebra section of the ASSET assessment, or a COMPASS score of 41-65 on the Algebra section, or successful completion of MAT 050 - Basic Algebra. Through real-world approaches, presents mathematical concepts of measurement, proportion, geometry, equation solving, and statistics.

MAT 115 Statistics **3 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment or a COMPASS score of 66 or higher on the Algebra section, or successful completion of MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Provides study in the collection, interpretation and presentation of descriptive and inferential statistics, including measures of central tendency, probability, binomial and normal distributions, hypothesis testing of one- and two-sample populations, confidence intervals, chi-square testing, correlation, data description and graphical representations.

MAT 121 Geometry-Trigonometry **3 Credits**

Prerequisites: A raw score of 13 or higher on the Geometry section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra or MAT 112 - Functional Mathematics. Provides study in geometry and trigonometry including polygons, similar figures, geometric solids, properties of circles, constructions, right triangles, angle measurements in radians and degrees, trigonometric functions and their application to right triangles, Pythagorean theorem, laws of sine and cosine, graphing of trigonometric functions, trigonometric identities, vectors and coordinate conversions.

MAT 131 Algebra/Trigonometry I **3 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Provides study in algebra, including functions, exponential rules, linear equations, radicals, vectors, right triangle trigonometry, oblique triangles, graphs of sine and cosine functions.

MAT 132 Algebra/Trigonometry II **3 Credits**

Prerequisites: Demonstrated mathematics competency through test-out or successful completion of MAT 131 - Algebra/Trigonometry I. Continues study in algebra and trigonometry including systems of equations, graphing of trigonometric functions, trigonometric equations, rectangular and polar coordinates, complex numbers, exponential and logarithmic functions and conics.

MAT 133 College Algebra **4 Credits**

Prerequisites: A scaled score of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Presents an in-depth study of polynomials, radicals, rational expressions, inequalities, complex numbers, functions, matrices, graphs, and conics.

MAT 134 Trigonometry **2 Credits**

Prerequisites: A scaled scored of 41 or higher on the Intermediate Algebra section of the ASSET assessment, or successful completion of MAT 111 - Intermediate Algebra. Presents an in-depth study of vectors, right triangle trigonometry, oblique triangles, graphs of trigonometric functions, and an introduction to complex numbers.

MAT 135 Finite Math **3 Credits**

Prerequisites: A scaled score of 41 or higher on the College Algebra section of the ASSET assessment, or a COMPASS score of 46 or higher on the College Algebra section, or successful completion of MAT 111 - Intermediate Algebra. Surveys solving and graphing linear inequalities, elementary set theory, matrices and their applications, linear programming and elementary probability.

MAT 201 Brief Calculus **3 Credits**

Prerequisites: A COMPASS score of 46 or higher on the Trigonometry section (ASSET cannot be used), or MAT 111 - Intermediate Algebra and one of the following: MAT 121 Geometry-Trigonometry, MAT 132 - Algebra/Trigonometry II, MAT 133 - College Algebra or MAT 135 - Finite Math. Studies the fundamental concepts and operations of calculus, including the study of functions, limits, continuity, derivatives, points-of-inflection, first-derivative test, concavity, second-derivative test, optimization, antiderivatives, integration by substitution, integration by parts, and elementary applications of a definite integral.

Life and Physical Sciences

ANP 101 Anatomy and Physiology I **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Develops a comprehensive understanding of the close inter-relationship between anatomy and physiology as seen in the human organism. Introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit.

ANP 102 Anatomy and Physiology II **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Continues the study of the inter-relationships of the systems of the human body.

ANP 201 Advanced Human Physiology **4 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II. Provides a study of human physiology for students entering health-oriented fields. Emphasizes the study of the function of the nervous, muscular, circulatory, respiratory, urinary, digestive and endocrine systems, and their homeostatic mechanisms and system interaction. Focuses laboratory exercises on clinically relevant measurement of human function.

ANP 203 Human Anatomy and Physiology I **5 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Provides a comprehensive study of the interrelationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function.

ANP 204 Human Anatomy and Physiology II **5 Credits**

Prerequisites: ANP 203 - Human Anatomy and Physiology I. Provides the remaining comprehensive study of the interrelationship between anatomy and physiology from chemical to cellular to organ interactions. Provides an in-depth study of each system of the body from a viewpoint of structure as well as function.

BIO 101 Introductory Biology **3 Credits**

Prerequisites: Demonstrated competency in writing, reading, and computation through appropriate assessment or successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Introduces the basic concepts of life. Includes discussion of cellular and organismal biology, genetics, evolution, ecology and interaction among all living organisms. Addresses applications of biology to society.

BIO 211 General Microbiology **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, and MAT 044 - Mathematics. Presents an overview of microbiology which includes fundamentals, methods and materials. Introduces industrial and clinical microbiology, and special topics.

BIO 212 General Microbiology II **2 Credits**

Prerequisites: BIO 211 - General Microbiology and ANP 101 - Anatomy and Physiology I. Presents a secondary study of bacteria, viruses, fungi, rickettsia, and parasites. Emphasizes the study of bacterial growth and control demonstrated by serological techniques.

CHM 101 Chemistry I **3 Credits**

Prerequisites: Demonstrated competency in writing, reading, and computation through appropriate assessment or successful completion of ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, and MAT 111 - Intermediate Algebra Includes the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, stoichiometry and gases.

CHM 102 Chemistry II **3 Credits**

Prerequisites: CHM 101 - Chemistry I. Includes liquids and solids, solutions and solution concentrations, acids and bases, equilibrium, nuclear chemistry, and organic and biochemistry.

PHY 100 Technical Physics **4 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. **Pre or Corequisites:** MAT 121 - Geometry-Trigonometry or MAT 131 - Algebra/Trigonometry I. Introduces the concepts and applications of physics. Leads students to develop an integrated understanding of the theory and applications of measuring (or unit) systems, scalars, vectors, force, work, rates, energy, momentum, power, force transformers (simple machines), vibrations and waves, and time constants. Emphasizes understanding concepts, factual knowledge, computation and application.

PHY 101 Physics I **4 Credits**

Prerequisites: MAT 121 - Geometry-Trigonometry, or MAT 131 - Algebra/Trigonometry I, or MAT 134 - Trigonometry. Introduces the basic concepts of mechanics, including force and torque, linear and rotational motion, work, energy and power, simple machines, fluids, and the physics of heat.

PHY 102 Physics II **4 Credits**

Prerequisites: PHY 101 - Physics I. Introduces the physics of light, periodic and wave motion, electricity and magnetism, and concepts of modern and current physics.

SCI 111 Physical Science **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment or ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, and MAT 050 - Basic Algebra. Introduces physical concepts and theories pertaining to current applications and trends in physics, chemistry, earth science and astronomy. Emphasizes concepts and factual knowledge.

Basic Skills Advancement Courses

English as a Second Language (ESL) Courses

ENG 001 Elementary English as a Second Language **3 Credits**

Prerequisites: Demonstrated ability to write and understand simple statements and questions on familiar topics. The suggested range on the English Placement Test is 16-35. Emphasizes writing elementary statements, reading and understanding elementary materials, and expanding competence in speaking and listening.

ENG 002 Intermediate English as a Second Language **3 Credits**

Prerequisites: Demonstrate intermediate competency in English with ability to read, write, and speak with control of basic language structures. The suggested range on the English Placement Test is 36-54. Emphasizes writing, reading and speaking with increasing competence in academic and social situations.

ENG 003 Pre-Academic English as a Second Language **3 Credits**

Prerequisites: Demonstrate fair control of most sentence structure, expository materials, statement and conversation in social and academic settings. The suggested range on the English Placement Test is 55-65. Emphasizes paragraph organization, reading and understanding expository and academic materials through vocabulary development. Develops comprehension of social and academic conversations and lectures.

ENG 004 Academic English as a Second Language **3 Credits**

Prerequisites: Demonstrate ability to write with some ease, understands expository academic reading material, understand lectures and converse in academic and social situations. The suggested range on the English Placement Test is 66-84. Emphasizes organization of expository writing, finding main ideas and details in academic texts, and understanding and speaking in academic settings.

ENG 010 English As A Second Language - Reading I **3 Credits**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Develops basic reading skills in English using texts on subjects relating to American culture. Emphasizes vocabulary acquisition, dictionary use, reading strategies for basic comprehension and interpretation. Uses collaborative technique of student interaction.

ENG 011 English As A Second Language - Reading II **3 Credits**

Prerequisites: Level I ESL Reading Mastery. Stresses comprehension skills using texts which focus on American cultural values. Focuses on vocabulary expansion, comprehension and interpretation strategies, and experience with various forms of reading material.

ENG 012 English As A Second Language - Reading III **3 Credits**

Prerequisites: ENG 011 - English As A Second Language - Reading II. Stresses comprehension skills and reading strategies for academic materials. Focuses on vocabulary expansion, transitional development, theme development, and critical analysis of academic writing. Allows for practice in increased reading proficiency.

ENG 013 English As a Second Language - Listening/Speaking I **3 Credits**

Prerequisites: CASAS/IRCA Pre-Enrollment Appraisal. Focuses on listening and speaking strategies for comprehensible input. Provides practice recognizing and producing speech patterns of American English. Allows for conversational practice on topics of cultural values and behaviors.

ENG 014 English As A Second Language - Listening/Speaking II **3 Credits**

Prerequisites: Level I ESL Listening/Speaking Mastery. Provides practice in recognizing and producing speech patterns of American English. Allows for conversational practice with emphasis on cross-cultural values and behaviors and the use of idioms.

ENG 015 English As A Second Language - Listening/Speaking III **3 Credits**

Prerequisites: ENG 014 - English As A Second Language - Listening/Speaking II. Provides experience in recognizing and producing speech patterns of American English. Allows for conversational practice relating to academic and cultural subjects, with an emphasis on critical thinking skills expressed verbally.

ENG 016 English As A Second Language - Grammar/Structure I **3 Credits**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on the acquisition of basic patterns of structure and syntax for controlled communication. Emphasis is on the form, meaning, and usage of basic structures in American English, providing practice through extensive and varied communicative activities.

ENG 017 English As A Second Language - Grammar/Structure II **3 Credits**

Prerequisites: Level I ESL Grammar/Structure Mastery. Focuses on the study of patterns of more advanced structure and syntax. Emphasis is on the acquisition of sentence structure for verbal and written communication of the relationship of ideas.

ENG 018 English As A Second Language - Grammar/Structure III **3 Credits**

Prerequisites: ENG 017 - English As A Second Language - Grammar/Structure II. Focuses on the acquisition of more advanced patterns of structure and syntax. Emphasis is on the development of competent verbal and written expression in critical analysis for academic purposes.

ENG 019 English As A Second Language - Writing I **3 Credits**

Prerequisites: CASAS/IRCA Pre-enrollment Appraisal. Focuses on conventions for basic written communication in English, emphasizing sentence construction and paragraph development. Uses writing strategies to produce coherent expression in journals, free writing exercises, paragraphing, and short essays. Student collaboration is a part of the learned writing process.

ENG 020 English As A Second Language - Writing II **3 Credits**

Prerequisites: Level ESL Writing Mastery. Focuses on techniques of written communication for coherent expression of ideas, through paragraph development and essay writing. Emphasizes the writing process using strategies of revision and editing through peer collaboration. Stresses the structure and syntax of written expression for effective communication.

ENG 021 English As A Second Language - Writing III **3 Credits**

Prerequisites: ENG 020 - English As A Second Language - Writing II. Focuses on techniques of written communication for the analysis and elaboration of academic material through paragraph and essay writing. Emphasizes the strategies of the writing process through rhetorical modes of composition for varied purposes. Extensive use of structure and syntax for thoroughly coherent expression.

Language Arts

ENG 007 Spelling **3 Credits**

Prerequisites: None. Improves basic spelling competencies through practice and attention to spelling rules and exceptions.

ENG 024 Introduction to College Writing I **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment (ASSET 32-37, COMPASS 23-51). Enables the beginning college writer to develop control of the writing process through writings which are focused, organized, and well developed. Requires students to demonstrate proficiency in basic standard writing conventions, including grammar and mechanics.

ENG 025 Introduction to College Writing II **3 Credits**

Prerequisites: Successful completion of ENG 024 - Introduction to College Writing I or demonstrated competency through appropriate assessment (ASSET 38-40, COMPASS 52-69). Builds on the competencies learned in ENG 024 - Introduction to College Writing I and prepares students for entry into English 111. Enables beginning college writers to expand control of the writing process through writings which are focused, organized and well developed. Requires students to demonstrate increased proficiency in the use of standard writing conventions.

ENG 028 Vocabulary Building **1 Credit**

Prerequisites: None. Focuses on developing general English vocabulary. Includes dictionary skills, context skill and work structure analysis.

ENG 031 Reading Strategies for College I **3 Credits**

Prerequisites: Demonstrated competency through appropriate assessment (ASSET 32-35, COMPASS 44-65). Increases performance in reading comprehension, vocabulary and flexibility. Introduces critical reading skills and study strategies.

ENG 032 Reading Strategies for College II **3 Credits**

Prerequisites: Successful completion of ENG 031 - Reading Strategies for College I or demonstrated competency through appropriate assessment (ASSET 37-39, COMPASS 66-79). Enhances performance in reading flexibility, vocabulary and comprehension beyond the level of ENG 031 - Reading Strategies for College I. Emphasizes critical reading and strategies for effective study.

Mathematics

MAT 044 Mathematics **3 Credits**

Prerequisites: Demonstrated competency on the numerical skills section of the assessment (ASSET 32-40, COMPASS 19-43). Reviews fractions and decimals. Concentrates on ratio, proportion, percents, measurement, signed numbers, equations and their applications.

MAT 050 Basic Algebra **3 Credits**

Prerequisites: Successful completion of MAT 044 - Mathematics or demonstrated competency through appropriate assessment (numerical skills section - ASSET 41+, COMPASS 44-100), (pre-algebra section - ASSET 23-38, COMPASS 0-40). Reviews signed numbers and simple equation solving. Concentrates on integer exponents, scientific notation, linear and literal equations, polynomial operations, polynomial factoring, and graphing skills in preparation for intermediate algebra.

Life and Physical Sciences

CHM 061 Basic Chemistry **3 Credits**

Prerequisites: Successful completion of ENG 032 - Reading Strategies for College II and MAT 050 - Basic Algebra, or demonstrated competency in the reading section (ASSET 41+, COMPASS 80-100) and the algebra section (ASSET 40-55, COMPASS 41-100) of the assessment. Provides students with an introduction to chemistry basics. Provides instruction for students with little or no recent chemistry background, especially those desiring to continue in more advanced chemistry courses or other science courses.

BIO 065 Basic Life Sciences **3 Credits**

Prerequisites: Success completion of ENG 031 - Reading Strategies for College I, and MAT 044 - Mathematics or demonstrated competency on reading section (ASSET 37+, COMPASS 66+) and mathematics section (ASSET 41+, COMPASS 44-100) of the assessment. Introduces the scientific method and basic concepts and terminology used in biology, microbiology, anatomy, physiology and organic chemistry which is related to life sciences. Prepares entering students who took no high school science or who took science several years ago for general education life sciences courses.

College Orientation

IVY 070 College and Life Success Skills **3 Credits**

Prerequisites: Minimum entry assessment at the ENG 024 - Introduction to College Writing I (ASSET 32-37, COMPASS 23-51) and ENG 031 - Reading Strategies for College I level (ASSET 32-35, COMPASS 44-65). Enhances success in college by assisting students in obtaining skills necessary to reach their educational, career, and life objectives. Topics include time management, memory techniques, reading techniques, note taking, test taking, problem solving and decision making, group interaction, and resource utilization.

PHL 071 Critical Thinking **3 Credits**

Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency on the writing section (ASSET 41+, COMPASS 70-100) and the reading section (ASSET 41+, COMPASS 80-100) of the assessment. Assists students in developing critical thinking strategies with academic and workplace applications.

CIS 074 Computer Literacy **2 Credits**

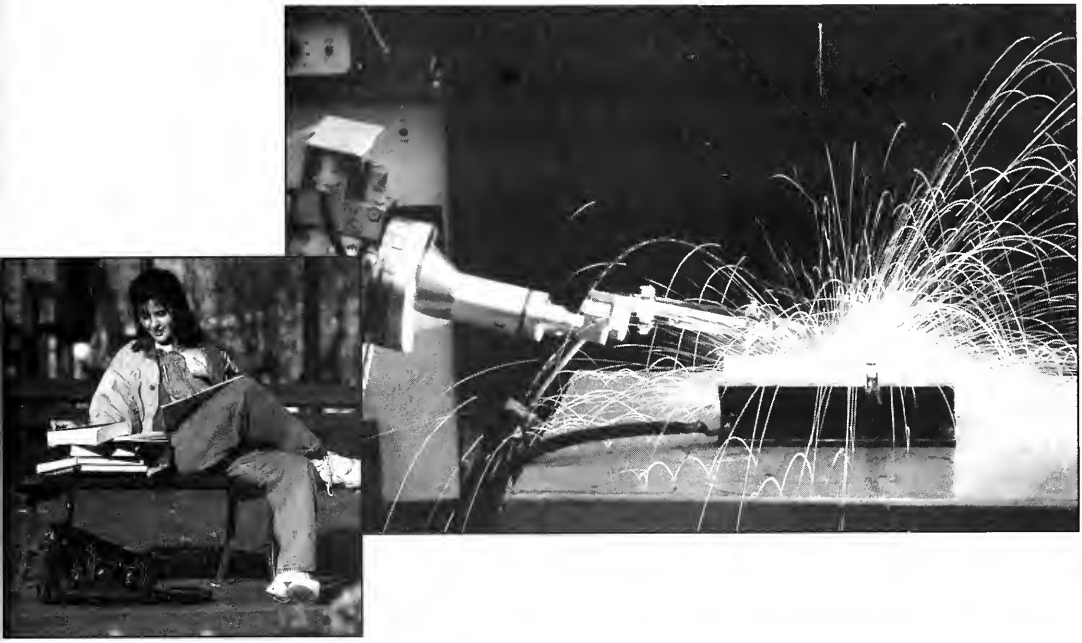
Prerequisites: Successful completion of ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competency on the writing section (ASSET 41+, COMPASS 70-100) and the reading section (ASSET 41+, COMPASS 80-100) of the assessment. Provides a general survey of computer basics. Includes the survey and analysis of microcomputer components, compares and contrasts computer applications, investigates software options, exposes students to hardware peripherals and introduces students to DOS operations.

OAD 019 Keyboarding **3 Credits**

Prerequisites: None. Provides students with the fundamentals of keyboarding using the touch method. Emphasizes mastery of the keyboard, development of speed and accuracy.

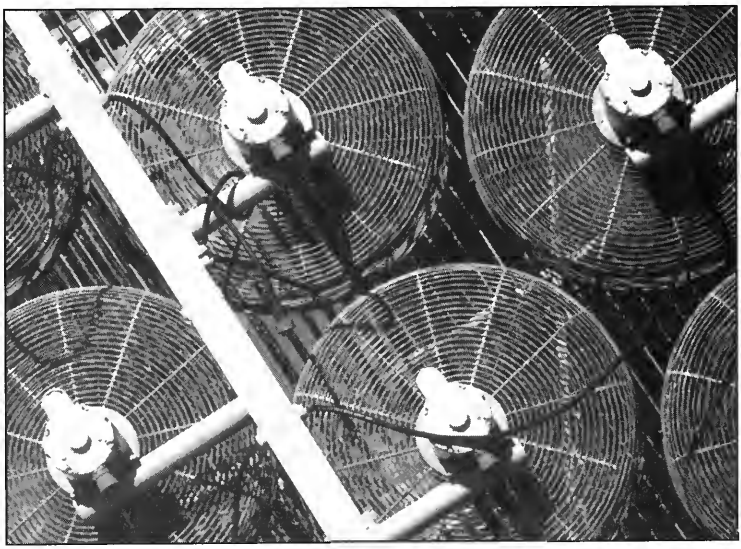
OAD 029 Speed and Accuracy Development **1 Credit**

Prerequisites: OAD 019 - Keyboarding. Designed to diagnose individual keyboarding speed and accuracy skills and bring those skills to an employable level.



Course Descriptions

IVY TECH STATE COLLEGE



Comprehensive Technical Course Description List

(Alphabetical Order)

ABR 101 Body Repair Fundamentals **3 Credits**

Prerequisites: None. Examines the characteristics of body metals and includes the installation of moldings, ornaments, and fasteners with emphasis on sheet metal analysis and safety.

ABR 103 Auto Paint Fundamentals **3 Credits**

Prerequisites: None. Introduces auto paint considerations with emphasis on the handling of materials and equipment in modern automotive technologies.

ABR 104 Collision Damage Analysis and Repair **3 Credits**

Prerequisites: None. Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

ABR 105 Conventional Frame Diagnosis and Correction **3 Credits**

Prerequisites: None. Covers the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes uses of frame gauges, tram gauges, and other measuring devices.

ABR 106 Body Repair Applications **3 Credits**

Prerequisites: None. Introduces fundamentals of using hand and power tools in the repair of minor collision damage with emphasis on safety.

ABR 107 Automotive Painting Technology **3 Credits**

Prerequisites: None. Provides instruction in the total refinishing of an automobile with emphasis on advanced and specialty painting techniques.

ABR 108 Unibody Structural Analysis and Repair **3 Credits**

Prerequisites: None. Covers unibody repair, identification and analysis of damage, measuring and fixturing systems, straightening systems and techniques, mechanical component service, and knowledge of suspension and steering systems on front-wheel-drive unibody vehicles.

ABR 109 Collision Damage Appraising **3 Credits**

Prerequisites: None. Covers uses of estimation guides, procedures for itemizing damage, abbreviations, numbers of parts, and uses of time and money conversion tables. Emphasizes damage inspection, recording on estimate sheets, and the calculation of costs.

ABR 110 Auto Body Power Tools **3 Credits**

Prerequisites: None. Covers diagnosis of problems associated with the use of power tools in auto body work.

ABR 111 Auto Body Hydraulic Tools **3 Credits**

Prerequisites: None. Provides instruction in the selection, use and maintenance of hydraulic tools for auto body repair.

ABR 112 Basic Body Lab I **1 Credit**

Prerequisites: None. Provides students with the opportunity to develop skills and knowledge in the area of basic auto body fundamentals.

ABR 113 Basic Body Lab II **1 Credit**

Prerequisites: None. Provides students with the opportunity to develop skills and knowledge in the area of basic auto body application.

ABR 114 Collision Damage Lab **1 Credit**

Prerequisites: None. Provides opportunities to develop skills and knowledge in the area of collision damage analysis and repair.

ABR 115 Auto Body Circuits **3 Credits**

Prerequisites: None. Includes fundamentals of electrical theory, automotive components and circuits, and troubleshooting techniques. Emphasizes battery construction, function, and operation.

ABR 116 Suspension and Alignment for Auto Body **3 Credits**

Prerequisites: None. Covers suspension and steering parts of an automobile and the theory of wheel alignment and wheel balance. Provides instruction in identifying wheel alignment angles, steering wheel positioning, vehicle tracking, and wheel balancing.

ABR 117 Auto Paint Lab **1 Credit**

Prerequisites: None. Develops auto painting skills with emphasis on materials and equipment handling.

ABR 118 Automotive Upholstery **2 Credits**

Prerequisites: None. Covers techniques of automobile interior refinishing. Includes study of spring construction, filling, and fabrics. Develops manipulation skills through practice projects on seats, panels, and armrests.

ABR 119 Glass Installation **3 Credits**

Prerequisites: None. Examines different types of automobile glass and their uses. Includes removal and installation of front and rear glass. Covers installing and adjusting side glass, bonding, rear-view mirror support, and use of rubber channel and synthetic rubber adhesive.

ABR 120 Fiberglass Plastic Repair **3 Credits**

Prerequisites: None. Introduces types of fiberglass and plastic materials used in auto body repair. Covers both interior and exterior applications.

ABR 121 Unibody Repair Lab **1 Credit**

Prerequisites: None. Develops skills and knowledge in the area of unibody structural analysis and repairs.

ABR 122 Conventional Frame and Unibody Structural Analysis, Diagnosis, and Repair **3 Credits**

Prerequisites: None. Includes the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes the uses of frame gauges, tram identification and other measuring devices. Unibody repair emphasizes identification and analysis of damage, measuring and fixturing systems, straightening systems and techniques, mechanical component service, and knowledge of suspension and steering systems on front wheel drive unibody vehicles.

ACC 101 Accounting Principles I **3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II, ENG 032 - Reading Strategies for College II, MAT 044 - Mathematics, or demonstrated competencies. Introduces the fundamental principles, techniques, and tools of accounting. Presents the mechanics of the accounting cycle including collecting, recording, summarizing, analyzing, and reporting information pertaining to service and mercantile enterprises. Covers internal control, deferred charges, notes and interest, valuation of receivables, payrolls, inventories, and plant assets.

ACC 102 Accounting Principles II **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I. Continues the study of accounting to include partnership and corporate accounting systems. Covers preparation and analysis of financial statements and long-term liabilities and investments. Introduces cost, managerial, branch, and nonprofit accounting techniques.

ACC 105 Income Tax I **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I (or) with program advisor approval. Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. Introduces tax concepts needed by a sole proprietorship.

ACC 106 Payroll Accounting **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I. Covers payroll calculating and reporting including various federal and state withholding taxes, employer payroll taxes, typical insurance and other arrangements affecting the preparation of payroll registers, and employees' earnings records. Includes computerized payroll.

ACC 107 Accounting for Recordkeeping **3 Credits**

Prerequisites: None. Provides instruction for non-accounting majors, with special emphasis on the trade professions. Covers the cash basis of recordkeeping for materials, payroll, depreciation, and financial statements. Introduces the operation of petty cash funds, basic cash budgeting, and controlling cash through the use of a checkbook. Covers financial ratios, construction accounting methods, and computing customer estimates.

ACC 108 Career Essentials of Accounting **3 Credits**

Prerequisites: None. Introduces the basic principles of accounting as utilized in a variety of office settings. Includes the principles of debit and credit, double-entry bookkeeping, use of journals, and analyzing transactions. Covers uses of ledgers, posting procedures, petty cash, banking procedures, payroll, depreciation, work sheets, balance sheets, and income statements.

ACC 109 Personal Finance **3 Credits**

Prerequisites: None. Examines the process of setting and achieving financial goals. Emphasizes managing financial resources, budgeting for current expenses, projecting cash flow, and managing short- and long-term credit. Includes use of insurance to reduce risks and vehicles for saving and investing.

ACC 111 Accounting Principles Lab I **1 Credit**

Prerequisites: Enrollment in ACC 101 - Accounting Principles I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an Accounting Principles I course. Introduces the touch-method of numeric input on a calculator and includes computerized problems.

ACC 112 Accounting Principles Lab II **1 Credit**

Prerequisites: Enrollment in ACC 102 - Accounting Principles II (or) with program Advisor approval. Presents a series of planned accounting learnir problems and activities designed to accompany concepts and theories included in the Accounting Principles II course. Uses computerized problems.

ACC 113 Income Tax Lab **1 Credit**

Prerequisites: Enrollment in ACC 105 - Income Tax I (or) with program Advisor approval. Presents a series of planned accounting learning problem and activities designed to accompany concepts and theories included in the Income Tax I course. Uses computerized problems.

ACC 114 Payroll Accounting Lab **1 Credit**

Prerequisites: Enrollment in ACC 106 - Payroll Accounting (or) with program Advisor approval. Presents a series of planned accounting learnin problems and activities designed to accompany concepts and theories included in the Payroll Accounting course. Uses computerized problems.

ACC 118 Financial Concepts for Accounting **3 Credits**

Prerequisites: None. Develops math skills needed in the business field and serves as a basis for course work in business. Includes the study of busines applications using rational numbers, algebraic equations, time value of money concepts, and basic statistics.

ACC 201 Intermediate Accounting I **3 Credits**

Prerequisites: ACC 102 - Accounting Principles II. Studies accounting principles and applications at an intermediate level pertaining to the incom statement and balance sheet, cash and short-term investments, receivables, inventories, plant assets and intangible assets, current and contingent liabili ties, corrections of errors, and statement of cash flows. Includes analysis of bad debts, inventory valuation, repairs and maintenance, depreciation o plant assets, and present value applications.

ACC 202 Intermediate Accounting II **3 Credits**

Prerequisites: ACC 201 - Intermediate Accounting I. Continues studies of Intermediate Accounting I. Includes investments, long-term debt, stock holders' equity, special accounting problems and analysis, statement of cash flows and financial statement analysis. Also includes corporate capital and treasury stock transactions, dividends, earnings per share, accounting for income taxes, correction of errors, and creation of financial statements from incomplete records.

ACC 203 Cost Accounting I **3 Credits**

Prerequisites: ACC 102 - Accounting Principles II. Examines the manufacturing process in relation to the accumulation of specific costs of manufac tured products. Studies various cost accounting report forms, material, labor control, and allocation of manufacturing costs to jobs and departments.

ACC 204 Cost Accounting II **3 Credits**

Prerequisites: ACC 203 - Cost Accounting I. Continues Cost Accounting I. Studies the master or comprehensive budget, flexible budgeting, and capital budgeting. Emphasizes tools for decision making and analysis. Introduces human resource accounting.

ACC 205 Seminar in Accounting **1 Credit**

Prerequisites: Program advisor approval. Allows accounting students an opportunity to pursue specific areas of interest at a more advanced level in accounting.

ACC 206 Managerial Accounting **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I. Provides an understanding of accounting records and management decision making, with topics including internal accounting records, and quantitative business analysis.

ACC 207 Accounting for Government and Nonprofit Entities **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I (or) with program Advisor approval. Emphasizes the similarities and differences between govern ment, nonprofit and commercial accounting methods, and procedures. Exposes students to the basic fund accounting cycle for the general fund and other special funds.

ACC 208 Income Tax II **3 Credits**

Prerequisites: ACC 105 - Income Tax I. Continues Income Tax I. Studies procedures and problems pertaining to federal and state income tax laws for partnerships and corporations. Includes a review and in-depth study of concepts related to proprietorships covered in Income Tax I.

ACC 209 Auditing **3 Credits**

Prerequisites: ACC 201 - Intermediate Accounting I. Covers public accounting organization and operation including internal control, internal and external auditing, verification and testing of the balance sheet and operating accounts, and the auditor's report of opinion of the financial statements.

ACC 210 Money and Banking **3 Credits**

Prerequisites: None. Studies monetary and banking theories as they relate to present-day domestic and international problems. Topics include banking operations, price changes, international monetary relationships, and application of monetary and fiscal policy.

ACC 212 Business Finance **3 Credits**

Prerequisites: None. Introduces basic tools and techniques of financial analysis and management and sources of financial and economic theory as applied to business finance. Includes conceptual materials related to valuation, capital structure formulation, and risk-return consideration.

ACC 213 Electronic Spreadsheets in Business **3 Credits**

Prerequisites: Computer literacy or equivalent, ACC 101 - Accounting Principles I. Provides instruction in the use of all modules of a spreadsheet software package including spreadsheet, graphics and database operations, and applying these modules to business problems.

ACC 214 Consumer and Commercial Credit **3 Credits**

Prerequisites: None. Provides instruction for retail, service, wholesale and manufacturing firms extending credit to clients. Explores theory, principles and practice of consumer and commercial credit related to business activity and economic impact. Examines managerial functions of collecting and controlling credit to consumers and businesses. Emphasizes credit plans, credit and sales, short-term and intermediate credit, and legal aspects of credit.

ACC 215 Credit Procedures and Collections **3 Credits**

Prerequisites: None. Examines credit as a means of extending purchasing power, i.e., increased buying power, immediate use of money, merchandise or services and delayed payment. Covers concepts of credit and principles and methods of credit administration involving individuals and businesses. Includes information on credit policy, credit control, credit decision making and legal remedies.

ACC 216 Credit Management **3 Credits**

Prerequisites: None. Explores functions of acquiring cycle of credit and management function of control cycle. Combines lectures, discussions, individual research, and projects with written and oral presentations of findings and results.

ACC 217 Intermediate Accounting Lab I **1 Credit**

Prerequisites: Enrollment in ACC 201 - Intermediate Accounting I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting I. Uses computerized problems.

ACC 218 Intermediate Accounting Lab II **1 Credit**

Prerequisites: Enrollment in ACC 202 - Intermediate Accounting II (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting II. Uses computerized problems.

ACC 219 Cost Accounting Lab **1 Credit**

Prerequisites: Enrollment in ACC 203 - Cost Accounting I (or) with program Advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Cost Accounting I. Uses computerized problems.

ACC 220 Special Applications Lab I **1 Credit**

Prerequisites: Program advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

ACC 221 Special Applications Lab II **1 Credit**

Prerequisites: Program advisor approval. Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

ACC 222 Accounting Software Applications **2 Credits**

Prerequisites: ACC 102 - Accounting Principles II. Solves accounting problems using software similar to what is currently used in business. Includes installation, operation, and analysis of an accounting software package.

ACC 223 Advanced Topics in Accounting **2 Credits**

Prerequisites: Program advisor approval. Discusses topics of current interest in accounting. Focuses on special interest projects for students in accounting. Includes trips, guest speakers, audio-visual activities, and seminars.

ACC 224 Construction Bidding **3 Credits**

Prerequisites: ACC 203 - Cost Accounting I. Examines bidding procedures, contract documents, contracts, bonds, and insurance. Describes materials and installation procedures and how they may affect the bid. Covers the unit of measure of the work, estimating the quantity of materials, and the relationship of the specifications.

ACC 225 Integrated Accounting Software **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I, CIS 101 - Introduction to Microcomputers, or advisor approval. Integrated accounting software package(s) will be used to illustrate computerized accounting practices. The general ledger will be integrated with accounts receivable, accounts payable, and other accounting.

ACC 281-293 Special Topics in Accounting **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interes that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ACC 298 Field Study/Cooperative Education **3 Credits**

Prerequisites: Must be enrolled in an Associate Degree Program. Must have permission from a Program Supervisor. The student works at a job site that is specifically related to his/her career objectives. The course is a field project within the framework of actual work experience in accounting.

AFS 101 Fire Technology **3 Credits**

Prerequisites: None. Examines the history of firefighting, identifies the types of apparatus and fire protection systems, and analyzes the fire problem in general. Provides a basis for the chemical and hazardous properties of combustion and the related by-products.

AFS 102 Fire Apparatus and Equipment **3 Credits**

Prerequisites: None. Examines in detail the types of apparatus in use today. Studies pumpers, aerials, elevating platforms and special apparatus. Utilizes National Fire Protection Association standards in identifying the proper responses for a given situation. Includes study of apparatus placement on an emergency incident, types of pumps, tests, equipment, drafting, relay, nozzles, fittings and hose lays and maintenance on various types of apparatus.

AFS 103 Firefighting Strategy and Tactics **3 Credits**

Prerequisites: None. Prepares the student to make responsible decisions concerning fireground strategies and tactics at the company level. Uses various priority scenarios, including preparing for incident command and commanding the initial response. Emphasizes company operations with basic command decisions.

AFS 104 Building Construction Fire Service **3 Credits**

Prerequisites: None. Examines the design principles involved in the protection of a structure from fire involvement. Studies the signs, symptoms and indicators of partial or total building collapse during firefighting operations. Includes the study of legislative codes and laws concerning building design, building fire safety, classification of building construction and blueprint reading.

AFS 105 Fire/Arson Investigation **3 Credits**

Prerequisites: None. Focuses on the responsibilities of the firefighter, the investigator and the department in fire scene investigations, fire cause and loss, collection and preservation of evidence, and determination of fire origin. Emphasizes the application and assistance of various scientific aids that assist in the investigation.

AFS 108 Fire Prevention/Inspection **3 Credits**

Prerequisites: None. Examines the function of the fire inspector and the organization of the fire prevention unit. Emphasizes identifying codes and regulations utilized by the inspector, with particular use of the Indiana Fire Code. Includes the legal authority of fire prevention principles, application of the fire code and sound management principles as applied to a bureau.

AFS 109 Fire Department Specifications **3 Credits**

Prerequisites: None. Surveys specifications of firefighting apparatus, equipment, protective clothing, facilities, and all other sources of materials necessary to a fire department. Study includes the writing of Standard Operating Guides (SOGs) and blueprint readings.

AFS 201 Fire Protection Systems **3 Credits**

Prerequisites: None. Provides a general introduction to fire alarm monitoring devices and extinguishing systems. Develops a strong base for fire protection or commercial applications. Covers fire extinguishing agents, portable fire extinguishers, carbon dioxide systems, dry chemical systems, halogenated systems/foam systems, explosive suppression systems, thermal/smoke/flame detection systems and building monitoring systems. Covers standpipe and sprinkler systems.

AFS 202 Fire Service Management **3 Credits**

Prerequisites: None. Studies the principles and functions of administrative and management personnel in the fire service. Topics discussed include departmental organizations, administrative and management procedures, personnel selection, line and staff functions, communications, the fire company unit, public relations and current problems in administration.

AFS 203 Incident Command **3 Credits**

Prerequisites: None. Emphasizes leadership in the application of knowledge, skills and abilities pertaining to fire hazards and causes, firefighting strategy and tactics, fire technology, safety practices, and fire suppression.

AFS 204 Fire Service Hydraulics **3 Credits**

Prerequisites: None. Studies compressible fluids including fluid properties, principles of fluid statics, flow system principles, pipe friction and head loss, flow measurements, pumps and other appliances and hydraulic devices. Relates applications to fire protection, water supply and foam systems.

AFS 205 Aircraft Firefighting **3 Credits**

Prerequisites: None. Examines the hazards associated with aircraft firefighting. Includes lecture and practical use of airport firefighting equipment, extinguishing agents, strategy and tactics, rescue methods, and aircraft design and construction.

AFS 206 Shipboard Firefighting **3 Credits**

Prerequisites: None. Focuses on firefighting strategy and tactics for land-based fire department personnel and equipment. Includes a survey of equipment, hook-ups, procedures, incident command, use of foam, and support systems on ships.

AFS 207 Fire Safety Hazard Recognition **3 Credits**

Prerequisites: None. Provides intensive study of the fire problem. Surveys physical, chemical, and electrical hazards and their relationship to loss of property and life. Includes safe storage and handling of hazardous materials.

AFS 208 Industrial Fire Loss Prevention **3 Credits**

Prerequisites: None. Provides students with a comprehensive study of industrial fire loss prevention and control management programs. Includes procedures for fire risk and loss control, standards and specifications for equipment, laws, codes, regulations, organization of fire brigades and administrative control of industrial operation.

AFS 209 Fireground Management **3 Credits**

Prerequisites: None. Emphasizes the command and control of fire department major operations at an advanced level. Links operations and safety. Studies pre-incident preparation, size-up, incident command systems and incident management with large role-playing incident scenarios for students to solve.

AFS 210 Computers for the Fire Service **3 Credits**

Prerequisites: None. Focuses on the need for and uses of the computer in the fire service from computer-ordered dispatch to information retrieval of hazardous materials control and intervention. Includes the text-editing abilities of computer printing.

AMT 102 Introduction to Robotics **3 Credits**

Prerequisites: TEC 104 – Computer Fundamentals for Technology. Introduces students to robotics and automated systems and their operating characteristics. Covers robotics principles of operation and work envelopes. Teaches coordinate systems and how hydraulic, pneumatic and electromechanical systems function together as a system. Covers servo and non-servo controls, system capabilities and limitations and safety. Investigates robot tooling, including welders, grippers, magnetic pickups, vacuum pickups, compliance devices, adhesive applicators and paint sprayers.

AMT 103 Solid State Fundamentals **3 Credits**

Prerequisites: TEC 113 – Basic Electricity. Studies the fundamentals of solid-state active devices which are used in automated manufacturing equipment. Introduces students to the theory of solid-state active devices and provides experience in identification, applications and handling of the common types of devices.

AMT 201 Manufacturing Systems Control (PLCs) **3 Credits**

Prerequisites: TEC 104 – Computer Fundamentals for Technology and TEC 113 – Basic Electricity or advisor approval. Introduces the field of industrial controls. Teaches principles of control systems and how they are applied to a production system to achieve automation. Systems included in the course are stepper motors, programmable logic controllers, microprocessors, computers and feedback systems. Emphasizes programmable logic controllers and the local area network.

AMT 202 Work Cell Design and Integration **3 Credits**

Prerequisites: AMT 102 – Introduction to Robotics, AMT 201 – Manufacturing Systems Control (PLCs). Studies principles pertaining to design and implementation of robots in industrial work cells. Emphasizes selection of the best work site and robot system, application of cell sensor, development of cycle times, economic analysis, safety considerations, proposal preparation, and human resources development.

AMT 203 Automation Electronics **3 Credits**

Prerequisites: TEC 113 – Basic Electricity, MAT 111 – Intermediate Algebra or MAT 131 – Algebra/Trigonometry I. Demonstrate the operation and application of electronic devices in the automation field. Includes linear integrated circuits, sensors and interfacing systems, actuators and drive controls and process control techniques.

AMT 204 Automation Management **3 Credits**

Prerequisites: Advisor approval. Covers basic principles and applications for planning and controlling production operations and improvement programs. Includes system characteristics and solutions for production process and service operation problems; methods analysis; cost estimating; facilities planning, tooling and services acquisition and maintenance; production, project and program scheduling; materials and inventory management; safety and loss prevention; decision-making tools, and evaluation of alternatives.

AMT 205 Automated Manufacturing Systems **3 Credits**

Prerequisites: AMT 201 – Manufacturing Systems Control (PLCs), AMT 203 – Automation Electronics. Provides instruction in selecting equipme writing specifications, designing fixtures and interconnects, integrating systems, providing interfaces, and making the assigned systems operational produce "marketable" products.

AMT 206 Advanced Manufacturing Systems Control **3 Credits**

Prerequisites: AMT 201 - Manufacturing Systems Control (PLCs). Provides an in-depth study of programmable controllers. Emphasizes progra language installation, maintenance and applications.

AMV 100 Introduction to Transportation **3 Credits**

Prerequisites: None. Introduces students to the work environment of a transportation repair facility. Presents historical and future trends wi emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of A technician certification and related tools are presented.

AMV 101 Chassis and Suspension Principles **3 Credits**

Prerequisites: None. Describes various frame designs and suspension systems used in modern vehicles. Includes repair and replacement of steeri linkages and chassis components, both front and rear.

AMV 107 Engine Principles and Design **3 Credits**

Prerequisites: None. Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblie Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts, and rebuilding engines accordir to industry standards.

AMV 113 Electricity for Transportation **3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Introduces fundamentals of electricity and electrical behavior as applied to modern transportation. Include extensive use of digital multimeters and circuit troubleshooting. Presents an intensive study of the construction, function, and principles of operation starting motors, charging systems, and their control systems with emphasis on diagnosis and bench repair.

AMV 202 Computer Engine Controls **3 Credits**

Prerequisites: AST 106 - Electronic Ignition Systems. Examines computerized ignition, carburetor, fuel injection, and sensors for engine controls o late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the CCC, MCU, EEC-IV, lean burn, and other spark contr systems.

AMV 281-293 Special Topics in Automotive Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interes that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ART 102 Introduction to Illustration **3 Credits**

Prerequisites: None. Explores the factors involved with developing illustrations and working with illustrators. Concepts, styles, techniques, design and communication are discussed. Students can create finished illustrations using basic techniques or study and report on specific illustrators.

ART 111 Drawing for Visualization **3 Credits**

Prerequisites: None. Introduces students to the tools and methods of drawing. Presents drawing as a catalyst to seeing and a way of recording ideas Gives students the necessary drawing preparation for the study of graphic design.

ART 112 Electronic Layout **3 Credits**

Prerequisites: None. Deals with advanced issues of designing for communication. Develops creative problem solving skills. Uses the computer as a tool for executing layouts for client approval. Produces practical samples for student portfolios.

ART 114 Graphic Design **3 Credits**

Prerequisites: VIS 101 - Fundamentals of Design and ART 115 - Typography. Introduces design for communication. Teaches the steps in design development and the difference between message and concept. Produces samples for student portfolios.

ART 115 Typography **3 Credits**

Prerequisites: None. Addresses the issues pertinent to the proper and creative use of type and the enhancement of communication. Covers the history of type, typographic terminology, design, copyfitting attention to aesthetics, common sense, and how we read.

ART 116 Electronic Illustration — **3 Credits**

Prerequisites: None. Provides instruction in illustration techniques using computer software designed for creating illustrations, technical drawings, logos, packaging, maps, charts, and graphs. Emphasis is on preparing effective, creative illustrations for various media applications in an efficient, productive manner.

ART 117 Production — **3 Credits**

Prerequisites: Advisor approval. Focuses on the hand assembly of art and type for the printer's camera. Covers production terminology, printing process, hand preparation of illustrative materials for reproduction and preparation of mechanical art using hand skills. Produces samples for student portfolios.

ART 202 Special Projects I — **3 Credits**

Prerequisites: None. Accommodates student interest in specific areas or in areas where there is a need to strengthen skills. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of the program.

ART 203 Independent Study I — **3 Credits**

Prerequisites: None. Provides students with opportunities to design projects for specific areas of interest. Requires the project plan to be approved by the instructor. Restricts work to student program area and requires it to be portfolio quality.

ART 205 Special Projects II — **3 Credits**

Prerequisites: None. Provides specific experience in selected areas. Recommends completion of two projects. Requires instructor approval for additional projects.

ART 206 Independent Study II — **3 Credits**

Prerequisites: None. Builds skills in specific areas of a visual communications program or a related program such as marketing, advertising, and externship or supervision. Requires instructor approval for program projects. Requires program chairperson's approval to elect non-program coursework.

ART 209 Airbrush Rendering — **3 Credits**

Prerequisites: None. Presents concepts and practices in the use of airbrush to render visuals in black and white and in color.

ART 210 Illustration Techniques I — **3 Credits**

Prerequisites: None. Develops dexterity in the application of transparent and opaque media.

ART 211 Creative Illustration Concepts — **3 Credits**

Prerequisites: None. Introduces montage illustration through experience in actual problems.

ART 217 Advanced Graphic Design — **3 Credits**

Prerequisites: ART 112 - Electronic Layout. Provides experience with advanced design projects which communicate a common theme through several different media. Provides opportunity for students to work in a team environment.

ART 218 Digital Production — **3 Credits**

Prerequisites: None. Addresses issues of preparing camera-ready art electronically. Topics covered are preparing computer files for service bureau output, scanning and printing resolution, color matching and color models, trapping, and computer system operations and troubleshooting.

AST 102 Two-/Four-Wheel Alignment — **3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 103 Automotive Electronics — **3 Credits**

Prerequisites: None. Introduction to electrical theory and automotive circuits and components. Electron theory, electrical circuits, terms, wiring diagrams, and batteries are emphasized. Also, introduces electrical circuit and component test equipment.

AST 104 Start and Charge Systems — **3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Studies construction, function and principles of operation of starting motors, charging systems, and their control systems with emphasis on diagnosis and bench repair.

AST 105 Fuel Systems — **3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems, and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing, or overhauling fuel system and emission control components.

AST 106 Electronic Ignition Systems **3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Introduces basic principles of electronic ignition systems. Includes functions and testing of conventional breaker point ignitions.

AST 108 Electrical Accessory Systems **3 Credits**

Prerequisites: AMV 113 - Electricity for Transportation. Presents the functions, construction, and principles of operation and troubleshooting techniques for the accessories of automotive vehicles. Includes electrical accessories such as windshield wipers and washers, power seats, power windows, adjustable steering wheels, power tailgates, and power headlight doors.

AST 109 Small Gas Engine Maintenance **3 Credits**

Prerequisites: None. Presents theory, service, and repair of small gas engines and their components; emphasis is on safety, measurements, lubricants, fuels, and engine design.

AST 110 Small Gas Engine Overhaul **3 Credits**

Prerequisites: None. Covers disassembly, inspection, measuring, cleaning, machine repair, and proper assembly techniques applicable to small gas engine overhaul. Includes overhaul of carburetor and ignition systems and maintenance procedures on rebuilt two-cycle and four-cycle engines.

AST 111 Basic Auto Care **2 Credits**

Prerequisites: None. Provides basic instruction in auto maintenance for the automobile owner. Covers routine maintenance, economical operation, elimination of objectionable noises, care of interior and exterior appearance, warranty regulations, and emergency road procedures.

AST 112 OSHA/Automotive Service **3 Credits**

Prerequisites: None. Studies safety practices needed for routine automotive shop work. Provides opportunity for students to earn Red Cross certification in first aid. Stresses fire hazard, chemical handling, and eye safety.

AST 113 Automotive Diesel and Engine Theory **3 Credits**

Prerequisites: None. Covers operation of the diesel engine and differences between a diesel and gas engine. Includes instruction on shop equipment, fuels, oils, seals, bearings, lubrication, and cooling systems.

AST 114 Service Organization and Parts **2 Credits**

Prerequisites: None. Presents facility and personnel requirements for efficiently-run parts and service departments. Emphasizes principles, practices, and procedures necessary to effectively operate the departments. Includes manufacturer catalogs and component numbering systems, methods of scheduling time, and techniques for obtaining maximum work efficiency from technicians and specialists.

AST 201 Heating and Air Conditioning Principles **3 Credits**

Prerequisites: None. Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes a study of vacuum and electrical control circuits.

AST 203 Engine Rebuild **3 Credits**

Prerequisites: AMV 107 - Engine Principles and Design. Covers precision machines, tools, and equipment needed for rebuilding today's modern engine. Includes repair, proper assembly, and installation techniques applicable to the modern engine.

AST 204 Automatic Transmission/Transaxle **3 Credits**

Prerequisites: None. Deals with construction and functions and principles of operation. Emphasizes practical work experience in the lab where students will overhaul automatic transmissions and transaxle assemblies.

AST 205 Manual Transmission/Transaxle **3 Credits**

Prerequisites: None. Presents theory and overhaul procedures related to the manual transmission/transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 206 Heating and Air Conditioning Service and Repair **3 Credits**

Prerequisites: AST 201 - Heating and Air Conditioning Principles. Covers diagnosis, service, and repair procedures of the heating/air conditioning system. Includes replacement and overhaul procedures for components related to heating/air conditioning systems.

AST 207 Engine Performance **3 Credits**

Prerequisites: AMV 202 - Computer Engine Controls and AST 105 - Fuel Systems. Includes advanced instruction in the theory, diagnosis, and repair of computer-controlled ignition systems and fuel systems on late-model vehicles using state-of-the-art diagnostic equipment. Emphasizes recommended manufacturer methods for servicing the computer-controlled ignition system.

AST 208 Differentials/Drivelines **3 Credits**

Prerequisites: None. Studies differential and driveline theory and overhaul. Includes overhaul and service procedures applicable to gear sets, bearings, and seals. Includes theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles.

AST 209 Automotive Braking Systems **3 Credits**

Prerequisites: None. Covers theory, service, and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds, and drum and rotor service.

AST 210 Modified Automotive Engines **3 Credits**

Prerequisites: AST 203 - Engine Rebuild. Provides instruction for advanced transportation students and employed technicians to familiarize them with higher performance engines, durability, and economy. Stresses individuality in constructing performance engines.

AST 212 Comprehensive Diagnosis I **3 Credits**

Prerequisites: AMV 100 - Introduction to Transportation, AMV 101 - Chassis and Suspension Principles, AST 201 - Heating and Air Conditioning Principles, AST 207 - Engine Performance, and AST 220 - Transaxle and Driveline Service. Provides students with the opportunity to diagnose and repair the complete automotive system according to manufacturers' recommendations and specifications. Requires students to complete repair orders assigned by the instructor.

AST 213 Comprehensive Diagnosis II **3 Credits**

Prerequisites: AST 212 - Comprehensive Diagnosis I. Provides opportunity for students to complete work based on flat rate hours. Includes recordkeeping, parts procurement, and methods for determining unpaid labor lost on flat rate.

AST 215 ASE Certification Review **3 Credits**

Prerequisites: Advisor approval. Prepares professional automotive technicians for the National Institute for Automotive Service Excellence certification tests. Reviews all eight areas of testing and provides sample certification tests. Lectures will stress theory of operation and diagnostic logic. Labs will stress professional repair and testing techniques.

AST 220 Transaxle and Driveline Service **3 Credits**

Prerequisites: None. Covers complete diagnostic procedures for automatic transaxles, computer shift transaxles, drive axles, and shafts. Emphasizes on-car repair and removal procedures of transaxles and driveline components.

AVT 104 Introduction to Avionics **3 Credits**

Prerequisites: TEC 113 - Basic Electricity, AVT 110 - Aircraft Electricity and Basic Science, or permission from the instructor. Provides an overview of the aviation electronics industry. Introduces the student to the various job descriptions, duties, activities, and processes involved in manufacturing, repairing, and maintaining aircraft avionics systems.

AVT 109 Private Pilot Ground School **3 Credits**

Prerequisites: None. Provides preparation to take the Federal Aviation Regulation Private Pilot written exam. Includes principles of flight, Federal Aviation Regulations, flight environment, aircraft performance, aviation weather, weather charts, navigation, cross-country flight planning, emergency procedures, and aviation medical considerations as specified by Federal Aviation Regulation Part 141.

AVT 110 Aircraft Electricity and Basic Science **8 Credits**

Prerequisites: None. Covers the inspection and servicing of aircraft batteries, basic electricity/electronics, applied physics, mathematics, use of FAA and manufacturers' specifications, mechanic privileges, and limitations as specified by Federal Aviation Regulation Part 147. A total of 210 hours of instructional time is required.

AVT 111 Aviation Basics **7 Credits**

Prerequisites: Concurrent enrollment AVT 110 - Aircraft Electricity and Basic Science or prior completion of AVT 110- Aircraft Electricity and Basic Science. Covers the use and interpretation of electrical schematics, flow charts and diagrams, blueprint readings, mechanical drawings, use of graphs and charts, weight and balance procedures, non-destructive testing methods, aircraft hardware and material identification, aircraft cleaning and corrosion control, ground handling of aircraft, identification and selection of aircraft fuels, and fabrication of fluid lines and fittings as specified by Federal Aviation Regulation Part 147. A total of 190 hours instructional time is required.

AVT 120 Airframe Sheetmetal **6 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers aircraft sheetmetal fabrication including layout, drilling, riveting, the fabrication and repair of plastics, honeycomb and bonded aluminum structure, inspection, and repair of sheetmetal and composite structures as specified by Federal Aviation Regulation Part 147. A total of 186 hours of instructional time is required.

AVT 122 Airframe Structures **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers rigging controls of fixed wing aircraft and rotary wing aircraft, welding, inspection and repair of wooden aircraft structures, the application of aircraft finishes including paint and dope, inspection, test and repair of fabric covered structures, and inspection as specified by Federal Aviation Regulation Part 147. A total of 191 hours of instructional time is required.

AVT 124 Airframe Systems **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers the inspection, troubleshooting, and repair of landing gear retraction systems, shock struts, wheels, brakes and tires; inspection, troubleshooting, and repair of hydraulic and pneumatic systems and components; the overhaul of hydraulic units; inspection and repair of aircraft auxiliary systems, including ice and rain control, smoke and carbon monoxide warning systems, fire detection and extinguishing systems; inspection and servicing of air conditioning, pressurization and oxygen systems and components; checking and servicing fuel management and dump systems as specified by Federal Aviation Regulation Part 147. A total of 189 hours instructional time is required.

AVT 126 Airframe Avionics and Electronics Systems **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers troubleshooting and repair of aircraft instruments and instrument systems; aircraft electronic systems including auto-pilot, communication and navigation systems; airframe electrical systems; the performance of aircraft conformity; and airworthiness inspections as specified by Federal Aviation Regulation Part 147. A total of 184 hours instructional time is required.

AVT 130 Reciprocating Powerplant **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers inspection and repair of radial engines; overhaul, inspection and removal of reciprocating engines; overhaul of magneto and inspection of reciprocating ignition system; inspection, servicing, and troubleshooting of engine fuel system components as specified by Federal Aviation Regulation Part 147. A total of 191 hours instructional time is required.

AVT 132 Powerplant Systems and Components I **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers inspection, repair and troubleshooting of engine instrument systems; identification of engine lubricants; inspect, check, troubleshoot, and repair engine lubrication systems; overhaul of carburetor; repair of engine fuel metering systems; inspect, check, troubleshoot, and repair engine cooling and exhaust systems as specified by Federal Aviation Regulation Part 147. A total of 192 hours of instructional time is required.

AVT 134 Turbine Powerplant **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers the overhaul of a turbine engine; the inspection, checking, servicing, repair, and removal/installation of turbine engines; inspection, checking of turbine ignitions; service and troubleshoot turbine pneumatic starting systems, fuel metering systems, APU and unducted fan systems as specified by Federal Aviation Regulation Part 147. A total of 186 hours of instructional time is required.

AVT 136 Powerplant Systems and Components II **7 Credits**

Prerequisites: AVT 110 - Aircraft Electricity and Basic Science and AVT 111 - Aviation Basics or permission from the instructor. Covers inspection, repair, and troubleshooting of propeller control systems; the removal, installation and balancing of propellers; inspect, check, service, troubleshoot, and repair of engine fire detection systems; repair, check, service engine electrical wiring and controls; troubleshoot and adjust turbine engine fuel metering systems as specified by Federal Aviation Regulation Part 147. A total of 181 hours of instructional time is required.

AVT 203 F.C.C. License **3 Credits**

Prerequisites: AVT 104 - Introduction to Avionics or permission from the instructor. Prepares the student for the F.C.C. examination. Emphasis will be placed on reviewing the avionics courses and curriculum.

AVT 205 Navigation and Communications Systems **3 Credits**

Prerequisites: AVT 104 - Introduction to Avionics or permission from the instructor. Exposes the student to correct safety practices and develops comprehensive knowledge and technical skills required to repair and maintain complex aircraft navigation and communication systems.

AVT 206 Aviation Control Circuits **3 Credits**

Prerequisites: AVT 104 - Introduction to Avionics or permission from the instructor. Designed as an advanced skills course with emphasis on F.C.C. and aircraft controls and circuitry. Studies auto pilot, approach linkages, safety, position warning systems, and the glass cockpit.

BCT 102 Construction Materials **3 Credits**

Prerequisites: None. Develops skills in identifying building materials commonly used in modern building construction. Provides experience in the application of locally accessible materials.

BCT 104 Floor and Wall Layout and Construction **3 Credits**

Prerequisites: None. Examines the design and construction of floor and wall systems. Develops skills needed for layout and construction of floor and wall systems from blueprints and professional planning documents.

BCT 105 Roof Construction **3 Credits**

Prerequisites: CON 101 – Introduction to Construction Technology. Studies the design and construction of roof systems. Emphasizes use of the framing square for traditional rafter and truss roofing. Instructs students in additional up-to-date techniques.

BCT 107 Furniture Design and Construction **3 Credits**

Prerequisites: None. Develops skills in the design, layout and construction of furniture. Introduces furniture styles, types of materials used, and methods of construction.

BCT 108 Cabinetry Fabrication Techniques **3 Credits**

Prerequisites: None. Develops skills in the design, layout, and construction of cabinets. Provides opportunities for students to lay out and fabricate faceplates and cases for cabinets.

BCT 109 Furniture Refinishing and Repair **3 Credits**

Prerequisites: None. Develops knowledge and skills in the technology of refinishing and repairing furniture. Introduces procedures used in stripping, bleaching, caning, veneering, and wood fillers.

BCT 110 Cabinetry **3 Credits**

Prerequisites: None. Introduces the basic skills and technology of cabinet making, focusing on cabinet design and layout, terminology, tools and skill requirements.

BCT 111 Woodworking Fundamentals **3 Credits**

Prerequisites: None. Introduces the basic skills and technology of woodworking and focusing on tool and machine operations. Introduces proper jointry and material selection.

BCT 112 Millwork **3 Credits**

Prerequisites: None. Introduces the basic skills and technology of the production of wood products and focuses on machinery set-up and operations for making moldings, door frames, and picture frames.

BCT 113 Cabinetry/Furniture Door and Drawer Assembly **3 Credits**

Prerequisites: None. Develops skills in the design, layout, and construction of cabinet/furniture doors, drawers and counter tops. Introduces types of hardware and installation methods.

BCT 114 Exterior Trim **3 Credits**

Prerequisites: None. Develops necessary skills in finishing building exteriors. Provides training in the installation of the cornice, windows, doors, and various types of sidings used in today's market place.

BCT 115 Auxiliary Building Design and Construction **3 Credits**

Prerequisites: CON 101 – Introduction to Construction Technology. Develops carpentry skills in construction of garages, storage buildings, wood decks, patios, privacy fences, and gazebos.

BCT 201 Residential Wiring **3 Credits**

Prerequisites: TEC 113 – Basic Electricity. Covers the practice of residential wiring, including electrical service, metering equipment, lighting, switches, outlets and other common components, and methods of installation and maintenance of the residential wiring system in accordance with the current National Electrical Code.

BCT 202 Plumbing Fundamentals **3 Credits**

Prerequisites: None. Studies the operation and function of the home plumbing system. Introduces pipe drawings and isometric pipe layout and blueprint symbols. Demonstrate how to rough in plumbing and install drainage, water systems, fixtures, and water heaters in compliance with the plumbing code.

BCT 203 Masonry Concrete Fundamentals **3 Credits**

Prerequisites: None. Covers materials and methods of construction with concrete block, brick and forming for poured concrete. Includes study in the preparation of the building site.

BCT 205 Advanced Projects in Building Construction I **3 Credits**

Prerequisites: CON 204 – Estimating and Specifications. Applies problem solving to common problems in construction. Emphasizes the cooperation between several trades in the construction industry.

BCT 206 Advanced Projects in Building Construction II **3 Credits**

Prerequisites: BCT 205 – Advanced Projects in Building Construction I. Applies problem solving skills to common challenges in construction. Emphasizes the cooperation between several trades in the construction industry allowing students to practice necessary skills to resolve the problem. Concentrates on decision-making skills.

BCT 207 Carpentry—Light Commercial **3 Credits**

Prerequisites: None. Introduces carpentry skills required in light commercial construction. Focuses on construction methods and materials used for office buildings, clinics, small churches, and other non-residential structures.

BCT 210 Vinyl and Aluminum Siding Applications **3 Credits**

Prerequisites: None. Provides in-depth examination of common and unusual problems encountered by an aluminum siding applicator on new jobs and existing structures. Includes sidings, soffit, fascia, rain gutter, and covering of trims and windows. Emphasizes actual installation and a wide variety of experiences. Includes standing seam and corrugated metal roofing, metal carports, awnings, metal storage buildings, ventilators, and flashings.

BCT 211 Construction Organization and Procedures **3 Credits**

Prerequisites: None: Introduces organization and management procedures focusing on subcontracting, equipment and tool inventories, job materials, codes, inspections, and permits.

BCT 213 Motors and Motor Controls **3 Credits**

Prerequisites: TEC 113 – Basic Electricity. Studies the wiring and design of motor control circuits, including circuit and conductor calculations, motor circuits and controls. Includes control transformers and service, circuit layout for motor control, and machine tool hook-up and control.

BCT 214 Wall and Floor Coverings **3 Credits**

Prerequisites: None. Covers modern materials and techniques of interior floor and wall coverings. Provides instruction on assessing the durability and maintenance of materials and techniques in correct installation procedures.

BCT 215 Basic Theory of Paint and Stain **3 Credits**

Prerequisites: None. Introduces the basic skills and techniques of finishing wood products, including proper preparation, staining, and finishing procedures.

BCT 216 Advanced Residential Design **3 Credits**

Prerequisites: Advisor approval. Studies residential floor plans and elevation. Analyzes contemporary living patterns, cost, privacy, convenience, and efficiency coordinated with needs. Compares exterior styles for cost and aesthetic values. Studies multiple housing, duplex arrangements, apartments and condominiums. Provides students with opportunities to do floor plans, elevations and perspective drawings to incorporate the conclusions reached from the above research.

BCT 217 Plumbing Mechanical Installation **3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Develops skills in the use of plumbing equipment. Covers residential and commercial installations, troubleshooting, and service and repair in conformance with codes.

BCT 218 Commercial Plumbing Installation and Estimating **3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Offers in-depth study of commercial plumbing with emphasis on code requirements and commercial blueprints. Instructs in estimating the cost of a complete plumbing system.

BCT 219 Survey and Measurement **3 Credits**

Prerequisites: None. Presents fundamentals of surveying, including use of transit, reading angles, land description, restrictions and legal problems. Covers topographical maps and their use.

BCT 220 Electrical Troubleshooting Techniques **3 Credits**

Prerequisites: TEC 113 – Basic Electricity and BCT 201 – Residential Wiring. Presents methods and techniques for troubleshooting appliances, motors, motor controls, relay wiring, residential wiring, commercial wiring, and industrial wiring systems.

BCT 221 Interior Trim **3 Credits**

Prerequisites: None. Develops basic knowledge, skills, and awareness of interior trim. Provides training in installation of drywall, moldings, interior doors, kitchen cabinets, and baseboard moldings.

BCT 222 Commercial/Industrial Wiring **3 Credits**

Prerequisites: BCT 104 – Floor and Wall Layout and Construction and CON 106 – Construction Blueprint Reading I. Introduces wiring methods and material selection for commercial and industrial wiring systems. Studies mechanical installation of hardware as well as electrical design, layout, and installation. Emphasizes tool use and material selection and installation.

BCT 223 Plumbing Design and Installation **3 Credits**

Prerequisites: BCT 202 – Plumbing Fundamentals. Provides techniques for working with pipes and fittings. Studies residential and commercial electrical hot water heating systems, private well water systems and electrical components of plumbing systems.

BCT 224 Energy Conservation Techniques **3 Credits**

Prerequisites: None. Offers an in-depth study of energy conservation techniques currently being applied and developed. Covers new materials, construction concepts, and alternative approaches being developed to reduce energy consumption.

BCT 225 Fabrication **3 Credits**

Prerequisites: None. Studies concepts and techniques of industrialized housing. Covers pre-fabrication, fabrication, jigs and rigging, including mobile homes, sectional homes, and modular homes.

BCT 226 Construction Supervisory Training **3 Credits**

Prerequisites: None. Examines the duties and responsibilities of the supervisor of a construction crew. Develops leadership abilities and techniques necessary to deal with special problems in daily construction work. Gives attention to adjusting to the role of supervisor and indicates what is expected from each member of the crew.

BCT 227 AC/DC Circuits **3 Credits**

Prerequisites: None. Studies basic electrical principles for both DC and AC circuits. Includes electron theory, Ohm's Law, Watt's Law, Kirchoff's Laws, series circuits, parallel circuits, series-parallel circuits, electromagnetism and electromagnetic induction, inductance and inductive circuits, LR time constants, LR circuits, RC circuits, LRC circuits, impedance and phase angles for current voltage, resistance, reactance and power. Studies components including resistors, inductors, capacitors and transformers.

BCT 231 Construction Supervision **3 Credits**

Prerequisites: None. Develops required skills in construction supervision.

BKR 101 Yeast Breads I **3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Prepares students to produce a variety of yeast raised breads and rolls using both straight dough and sponge dough methods. Emphasizes proper mixing, fermentation, make-up proofing, and baking.

BKR 102 Yeast Breads II **3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Prepares students to produce a variety of pastries. Emphasizes proper proofing, baking, and finishing. Focuses on sanitation, hygienic work habits, and conformance with health regulations.

BKR 103 Merchandising **3 Credits**

Prerequisites: BKR 102 - Yeast Breads II. Requires students to produce yeast raised and plasticized/sweet dough products for limited retail sale for a 12-week period. Studies merchandising and marketing, planning, production, controlling scrap, cash recaps, and all pertinent phases of a retail bake shop operation.

BKR 201 Cakes, Icings, and Fillings **3 Credits**

Prerequisites: HOS 105 - Introduction to Baking. Requires students to produce and finish a variety of cakes. Emphasizes application techniques, color coordination, and the flavor and texture of fillings. Practices the techniques of basic cake decorating. Emphasizes sanitation, hygienic work habits, and conformance with health regulations.

BKR 202 Advanced Decorating/Candies **3 Credits**

Prerequisites: BKR 201 - Cakes, Icings, and Fillings. Presents the six different classical styles of cake decorating, the production of gum paste objects which accompany the styles, the use of royal icings and investigates the similarities and differences between the six styles. Students will be required to produce examples of each style and technique, to include two practical examinations.

BNK 215 Principles of Banking **3 Credits**

Prerequisites: None. Discussion ranges from fundamentals of negotiable instruments to contemporary issues and developments within the industry.

BNK 216 Analyzing Financial Statements **3 Credits**

Prerequisites: None. Provides a practical introduction to financial analysis from the viewpoint of the commercial loan officer and develops skills needed to effectively assess a borrower's ability to repay loans.

BNK 217 Law and Banking: Applications and Principles **3 Credits**

Prerequisites: None. Introduces laws pertaining to secured transactions, letters of credit, and the bank collection process. Provides a banker's guide to law and legal issues with special emphasis on the Uniform Commercial Code.

BNK 218 Consumer Lending **3 Credits**

Prerequisites: None. Presents an insider's view of consumer lending, offering essential information about the maze of regulations that govern credit practices, and reviews loan processing, cross-selling, and collections.

BNK 219 Bank Management **3 Credits**

Prerequisites: None. Provides a complete introduction to the handling of day-to-day bank activities and incorporates case studies to help acquire bank management skills.

BNK 220 Trust Operations **3 Credits**

Prerequisites: None. Provides basic trust terminology and discusses the concepts and ideas that comprise the various trust functions. Translates them into workable procedures.

BUS 101 Introduction to Business **3 Credits**

Prerequisites: None. Examines the U.S. business system in relation to the nation's economy. Studies business ownership, organization principles and problems, management, and administration and development practices of American business enterprises.

BUS 102 Business Law **3 Credits**

Prerequisites: None. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales and negotiable instruments with emphasis on Uniform Commercial Code applications. Includes appropriate remedies for breach of contract and tort liabilities. Examines business structures and agencies.

BUS 103 Office Administration **3 Credits**

Prerequisites: None. Covers broad areas of administrative office services and management, including office organization, site location, layout and environment, records management, systems controls, and office communication services and devices.

BUS 104 Investment **3 Credits**

Prerequisites: None. Presents the basis of investing, with attention to the various ways in which investment vehicles operate.

BUS 105 Principles of Management **3 Credits**

Prerequisites: None. Describes the functions of managers, including the management of activities and personnel. Focuses on application of guidance principles in management.

BUS 107 Transportation Law **3 Credits**

Prerequisites: OPM 216 - Traffic and Transportation Management I. Reviews judicial systems and regulatory agencies, regulatory acts, Motor Carrier Act of 1980, Staggers Rail Act of 1980, obligations, rights and liabilities, regulation of rates, and rate-making agreements.

BUS 108 Personal Finance **3 Credits**

Prerequisites: None. Emphasizes management of individual financial resources for growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life and health insurance, securities, commodities, and other investment opportunities.

BUS 110 Business Statistics **3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Introduces students to the theory and applications of statistical inferential techniques as applied to business problems. The student is exposed to a software package to illustrate the extent that the computer has facilitated quantitative research.

BUS 202 Human Resource Management **3 Credits**

Prerequisites: BUS 105 - Principles of Management. Focuses on the activities of human resource management, with emphasis on employer-employee relations, job analysis and evaluation, salary administration, work measurement and standards, performance appraisal, and legal compliance.

BUS 203 Business Development **3 Credits**

Prerequisites: 45 credit hours and/or departmental approval. Explores business operations for the self-employed or as a manager of a small business enterprise. Covers the role of entrepreneur and manager; selecting the appropriate business organization; developing plans and strategies for small, medium, and growing firms; securing financing for start-up and growing operations; exploring growth opportunities, and successfully managing human and material resources.

BUS 204 Case Problems in Management **3 Credits**

Prerequisites: 45 program credit hours and departmental approval. Applies business concepts and principles to specific case studies or problems.

BUS 205 Risk Management **3 Credits**

Prerequisites: None. Examines risk faced by business firms and considers ways of handling them. Covers property, liability and personal losses, with attention to insurance contracts and their uses. Studies individual life, health and pension insurance, public policy, government regulations, and social insurance programs.

BUS 207 Introduction to International Business **3 Credits**

Prerequisites: BUS 101 - Introduction to Business and/or departmental approval. Provides an overview of the international environment within which business operates today. Demonstrate the global relationships between business activities and how events in one part of the world can influence business decisions and activities in other parts of the world.

BUS 208 Organizational Behavior **3 Credits**

Prerequisites: BUS 105 - Principles of Management. Studies human behavior in organizations at the individual and group level, including the effect of organizational structure on behavior. Focuses on using organizational behavior concepts for developing and improving interpersonal skills.

BUS 210 Managerial Finance **3 Credits**

Prerequisites: MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra, and ACC 101 - Accounting Principles I. Improves decision-making skills related to the financial resources of a firm. Includes techniques of financial analysis, time value of money, capital budgeting, and risk.

BUS 240 Introduction to Computer-Integrated Manufacturing **3 Credits**

Prerequisites: Advisor approval. Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers the planning of a project which will be formally documented and presented by students and implemented in BUS 241 - Computer-Integrated Manufacturing Project.

BUS 241 Computer-Integrated Manufacturing Project **3 Credits**

Prerequisites: Advisor approval. Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

BUS 280 Co-op/Internship **1-6 Credits**

Prerequisites: Departmental approval. Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

BUS 281-293 Special Topics in Business Administration **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CHD 121 Introduction to Early Childhood Profession **3 Credits**

Prerequisites: None. Introduces the philosophy of early childhood education. Includes theories of discipline, parent involvement, self-concept, and an overview of various early childhood settings. Includes lectures, field trips, and observations.

CHD 122 Child Growth and Development **3 Credits**

Prerequisites: None. Studies the physical, social, emotional, and cognitive development of children from conception to age eight, as well as their quality care and education. Includes lectures and observations.

CHD 123 Health, Safety, and Nutrition **3 Credits**

Prerequisites: None. Analyzes basic safety, health, and nutrition needs. Emphasizes applications related to early childhood programs.

CHD 124 Developmental and Cultural Awareness **3 Credits**

Prerequisites: None. Provides a basic understanding of the anti-bias/multi-cultural emphasis in the field of early childhood. Analyzes developmentally appropriate practices, theory, and implementation for various early childhood settings. Includes lectures, field trips, review of current literature, and observations.

CHD 125 Curriculum in the Creative Arts **3 Credits**

Prerequisites: None. Examines materials, methods, and teaching of creative arts to young children. Offers appropriate music, movement, art, and drama experiences for use in early childhood settings. Reviews theories of development of the young child.

CHD 128 Child Development Practicum I **2 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 122 - Child Growth and Development. Provides opportunity for practical experience through observation and supervised participation in childcare settings. Requires successful completion of the practicum to advance to Practicum II.

CHD 129 Child Development Practicum II **2 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 122 - Child Growth and Development. Provides opportunity fo practical experience through observation and supervised participation in childcare settings. Requires successful completion of the practicum to advanc to Practicum III.

CHD 130 Child Development Practicum I and II **4 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 122 - Child Growth and Development. Provides opportunity fo practical experience through observation and supervised participation in childcare settings. Requires successful completion of the practicum to advanc to Practicum III.

CHD 131 Seminar in Guidance Techniques **2 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 122 - Child Growth and Development. Surveys positive guidanc techniques and skills that are effective with young children. Provides students with the opportunity to observe children and attempt to understand thei needs.

CHD 142 Beginnings in Child Development **3 Credits**

Prerequisites: None. Examines basic principles of child development, developmentally appropriate practice (DAP), importance of family, licensing, and elements of quality care of young children. Entry-level course for early care and education teachers.

CHD 143 Curriculum in the Early Childhood Classroom **3 Credits**

Prerequisites: None. Entry-level course for Early Care and Education teachers. Examines developmentally appropriate environments and activities in various early care settings including all children.

CHD 202 Issues and Resources **3 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession, CHD 122 - Child Growth and Development, or with permission of advisor. Covers current early childhood issues, ethical and legal responsibilities, and working relationships with families and community resources. Analyzes the caregiver's role as a member of a multidisciplinary team.

CHD 206 Early Childhood Administration **3 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession, CHD 122 - Child Growth and Development, or with permission of advisor. Introduces principles of managing a childcare program. Emphasizes the manager's role including personnel and program administration and fiscal management. Explores client-community relations.

CHD 209 Families in Transition **3 Credits**

Prerequisites: None. Examines the stages of the family life cycle and interpersonal relationships among family members.

CHD 211 School Age Programming **3 Credits**

Prerequisites: None. Examines materials, methods, and teaching styles for creative experiences for school age children. Offers appropriate experiences in music, movement, art, and drama for use in school age childcare settings. Reviews theories of adolescent growth and development.

CHD 212 Adolescent Child Growth and Development **3 Credits**

Prerequisites: None. Studies in a lecture/laboratory setting the physical, social, emotional, and cognitive development of children 8-15 years old.

CHD 213 Infant/Toddler Care Programming **3 Credits**

Prerequisites: None. Studies the physical, social, emotional, and cognitive development of children 0-36 months old in a lecture/laboratory setting.

CHD 216 The Exceptional Child **3 Credits**

Prerequisites: None. Provides an introduction to caring for the exceptional child. Includes theories and practices for producing optimal developmental growth. Develops teaching techniques. Explores public policy, mainstreaming, early intervention, and individual education plans. Explores the types of exceptional children and how to help them.

CHD 217 Skills for Parenting **3 Credits**

Prerequisites: None. Focuses on skill development to increase parental effectiveness in understanding young children, building their self-esteem, communicating with them, setting appropriate boundaries, and nurturing children's emotional and social development.

CHD 218 Introduction to In-Home Care **3 Credits**

Prerequisites: None. Reviews childcare offered in a home-like setting. Includes providing safe, healthy learning environments in the home setting, parent-provider relationships, and recommendations for developing a professional support system.

CHD 221 Emerging Literacy in Young Children **3 Credits**

Prerequisites: None. Provides understanding of the development and acquisition of language. Explores and evaluates literature for young children. Introduces audio-visual material, methods, techniques, and various types of equipment which are utilized in early childhood programs.

CHD 225 Cognitive Curriculum **3 Credits**

Prerequisites: None. Reviews cognitive theories to develop appropriate problem solving, math, science, and social studies skills in early childhood settings. Reviews multi-cultural education.

CHD 230 Child Development Practicum III **4 Credits**

Prerequisites: CHD 128 - Child Development Practicum I, CHD 129 - Child Development Practicum II, and CHD 131 - Seminar in Guidance Techniques. Provides opportunity for practical experience through observation and supervised participation in childcare settings.

CHD 231 Seminar II - Issues in Early Childhood Education **2 Credits**

Prerequisites: CHD 128 - Child Development Practicum I, CHD 129 - Child Development Practicum II, and CHD 131 - Seminar in Guidance Techniques. Companion course to CHD 230. Focuses on the integration of knowledge and practices in the field of early childhood and explores issues in early childhood.

CHD 240 Child Development Associate Preparation **3 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 125 - Curriculum in the Creative Arts. Meets requirements of the Council for Early Childhood Professional Recognition for academic preparation for the Child Development Associate credential. Provides students with the theoretical knowledge to support competent performance in a childcare setting. Provides review of CDA competencies.

CHD 241 Supervised Practicum Experience **3 Credits**

Prerequisites: CHD 121 - Introduction to Early Childhood Profession and CHD 125 - Curriculum in the Creative Arts. Provides opportunity for practical experience through observation and supervised participation in childcare settings. Successful completion of the practicum is required to advance to Practicum II or Practicum III.

CHD 242 Curriculum Planning for Early Childhood Administrators **3 Credits**

Prerequisites: Program chair permission. Presents an overview of cognitive and creative curriculum from a developmentally appropriate perspective. Emphasizes planning and evaluating curriculum to meet comprehensive needs of the young child.

CHD 281-293 Special Topics in Child Development **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CIS 101 Introduction to Microcomputers **3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II or demonstrated competencies, or advisor approval. Introduces the physical components and operations of microcomputers. Focuses on computer literacy and provides hands-on training in three areas of microcomputer application software: word processing, electronic spreadsheets and database management.

CIS 102 Information Systems Fundamentals **3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II and ENG 032 - Reading Strategies for College II, or demonstrated competencies. Introduces data processing and programming with emphasis on hands-on computer experience. Examines the role of data processing in an organization, including data processing applications, computer hardware and software, internal data representation, stored program concepts, systems and programming design, flowcharting, and data communications. Reviews the history of computers, related computer careers, the social impact of computers, and computer security.

CIS 104 Introduction to COBOL Programming **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming. Provides an introduction to COBOL (Common Business Oriented Language) with major emphasis on developing structured programming skills. Develops proficiency in applying the programming development cycle to elementary business problems.

CIS 105 Operating Systems **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Studies computer operating systems, purposes, structure, and various functions. Provides general understanding of how comprehensive sets of language translators and service programs, operating under supervisory coordination of an integrated control program, form the total operating systems of a computer.

CIS 106 Microcomputer Operating System **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers and/or CIS 102 - Information Systems Fundamentals. Introduces the organization, structure and functions of an operating system for a microcomputer. Presents the student with operating system concepts such as commands, error messages, interrupts, function calls, device drivers, structure, files, and organization. Incorporates concepts into practical applications.

CIS 107 Microcomputer Programming **3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals and CIS 113 - Logic, Design, and Programming. Introduces a structured microcomputer language. Concepts in input/output commands, arithmetic expressions, conditional control, iteration techniques, and subroutines will be stressed. Concepts will be incorporated into the application of solving business problems.

CIS 108 Practical Computer Operations **3 Credits**

Prerequisites: None. Demonstrate workstation and minicomputer operations including peripheral devices. Provides information on data processing area, including job responsibilities, standards and run manuals, message control functions, documentation, and back-up procedures.

CIS 109 UNIX Operating Systems **3 Credits**

Prerequisites: None. Studies the UNIX V Operating System and its use as a time-sharing operating system. Includes basic UNIX commands, use of the visual editor, the UNIX directory structure and file management with SHELL commands. Offers opportunities to apply skills and knowledge in a laboratory environment.

CIS 110 Basic Programming Language **3 Credits**

Prerequisites: None. Introduces concepts of program design and programming using the BASIC programming language, the primary language for use with microcomputers. Includes overview of basic arithmetic operations, accumulating and printing totals, comparing, array processing, and interactive programming. Offers students an opportunity to apply skills in a laboratory environment.

CIS 113 Logic, Design and Programming **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or CIS 102 - Information Systems Fundamentals. Introduces the structured techniques necessary for efficient solution of business-related computer programming logic problems and coding solutions into a high-level language. Includes program flowcharting, pseudocoding, and hierarchy charts as a means of solving these problems. Covers creating file layouts, print charts, program narratives, user documentation, and system flowcharts for business problems. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, file handling, and control breaks. Offers students an opportunity to apply skills in a laboratory environment.

CIS 114 Principles of Management Information Systems **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers, CIS 102 - Information Systems Fundamentals, and BUS 101 - Introduction to Business. Examines the functions and operations required to manage information for business decisions. Focuses on the use of various information technologies and tools that support transaction processing, decision-making, and strategic planning. The diverse information needs of different organizations within a business will be used as examples of practical application of MIS technology.

CIS 116 Introduction to Java Programming **3 Credits**

Prerequisites: None, but prefer CIS 113 - Logic, Design, and Programming, a Windows-based class and Internet experience. This course provides a basic understanding of the fundamental concepts involved when using a member of a Java programming development language. The emphasis is on logical program design using a modular approach involving task oriented program functions. Java allows the design of an Internet user interface. The application is built by selecting forms and controls, assigning properties, and writing code.

CIS 120 Programming I **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides an introduction to business programming with the major emphasis on developing structured programming skills. Students will develop proficiency in applying the programming development cycle to elementary business problems.

CIS 201 Database Design and Management **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers and CIS 102 - Information Systems Fundamentals. Introduces program applications in a database environment and includes discussion of data structures; indexed and direct file organizations; data models, including hierarchical, network and relational; storage devices, data administration and analysis; design and implementation. Allows students to use database software in creating, modifying, retrieving and reporting from databases. Develops business application using a database language.

CIS 202 Data Communications **3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals. Introduces concepts of data communications for computer programming students to build a foundation of knowledge upon which to add new technologies.

CIS 203 Systems Analysis and Design **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers and minimum of 12 CIS credits successfully completed. Provides instruction for creating or modifying a system by gathering details, analyzing data, designing systems to provide solutions, and implementing and maintaining the systems.

CIS 204 Advanced COBOL Programming **3 Credits**

Prerequisites: CIS 104 - Introduction to COBOL Programming. Continues topics introduced in Introduction to COBOL with more logically complex business problems. Develops a higher level of COBOL proficiency, as well as greater familiarity with debugging techniques. Uses the structured approach through class instruction and laboratory experience.

CIS 205 Database Design **3 Credits**

Prerequisites: None. Introduces program applications in a database environment with emphasis on loading, modifying and querying the database by means of a host language (COBOL). Discusses data structures, indexed and direct file organizations, models of data, including hierarchical, network and relational, storage devices, data administration, and analysis and design and implementation.

CIS 206 Project Development with High-Level Tools **3 Credits**

Prerequisites: CIS 203 - Systems Analysis and Design. Analyzes established and evolving methodologies for the development of business-oriented computer information systems. Develops competencies in techniques that apply modern software tools to generate applications directly, without requiring detailed and highly technical program writing efforts.

CIS 207 Microcomputer Database Management Systems **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Presents an overview of relational, hierarchical and network database models with emphasis on microcomputer relational database management systems (DBMS). Provides practical experience in using database software to create, modify, retrieve and report. Develops business applications using the database language.

CIS 209 Computer Business Applications **3 Credits**

Prerequisites: CIS 207 - Microcomputer Database Management Systems, and COM 101 - Fundamentals of Public Speaking, or COM 102 - Introduction to Interpersonal Communication. Requires students to apply business, microcomputer, and communication skills within business applications. Emphasizes application of several forms of computerized information processing including data processing, word processing, spreadsheets, graphics, and communications. Analyzes the effects of automation on the office worker, management, and the work environment and requires written and oral presentations.

CIS 210 COBOL III **3 Credits**

Prerequisites: CIS 204 - Advanced COBOL Programming. Emphasizes file handling techniques on tape and direct access devices and the use of libraries via the COBOL, CALL, and COPY verbs. Introduces variant forms of the structured approach and unstructured concepts such as the GO TO verb. Helps students develop good programming practices and an entry-level COBOL competency.

CIS 211 RPG Programming Fundamentals **3 Credits**

Prerequisites: CIS 102 - Information Processing Fundamentals and CIS 113 - Logic, Design, and Programming. Provides a general introduction to the RPG programming language with emphasis on hands-on programming experience. Presents the most important features of the RPG language from input/output processing to applications requiring handling. Introduces language concepts in class lecture. Includes programming lab assignments.

CIS 212 "C"/"C++" Programming **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides a basic understanding of the fundamental concepts involved when using a low development language. Emphasizes one logical program design using a modular approach involving task-oriented program functions. Discusses the role of data types, storage classes, and addressable memory locations.

CIS 213 Assembler Language Program **3 Credits**

Prerequisites: CIS 102 - Information Processing Fundamentals and CIS 113 - Logic, Design, and Programming. Gives students a basic understanding of the assembler process using IBM mainframe computers. Stresses the importance of byte-wise manipulation of data fields when using low-level languages. Emphasizes the actual workings of a computer during the execution of a computer program. Discusses the role of data types, EBCIDIC format of data storage, and addressable memory locations.

CIS 214 Pascal Programming **3 Credits**

Prerequisites: None. Provides a basic understanding of the structured programming process necessary for successful Pascal programming. Emphasizes top-down program design and modularity, using Pascal procedures, functions, and independent subprograms. Discusses simple and advanced data types and program control aids, algorithm development, and program debugging. Provides students with a fundamental understanding of good programming technique and a basic knowledge of Pascal syntax and structure.

CIS 215 Field Study **4 Credits**

Prerequisites: None. Provides opportunity for a field project or research case study within the computer technology field. Includes collection and analysis of data and/or actual work experience in business or industry.

CIS 216 Advanced RPG Programming **3 Credits**

Prerequisites: CIS 211 - RPG Programming Fundamentals. Offers advanced study in the use of the RPG compiler language in solving business problems. Focuses on file processing methods and a working knowledge of advanced features and techniques through laboratory experience.

CIS 217 Programming II **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming or advisor approval. Provides a basic understanding of the fundamental concepts involved when using a development language. The emphasis is on program design using a modular approach involving risk oriented program functions. The role of data types, storage classes, and addressable memory locations is thoroughly discussed.

CIS 220 Shell Command Language **3 Credits**

Prerequisites: None. Teaches students how to write, test and debug shell procedures on a computer utilizing a UNIX operating system. Presents the shell and how it works, shell processes, variables, keyword and positional parameters, control constructs, special substitutions, pipelines, debugging aids, error/interrupt processing, and shell command line. Offers students the opportunity to apply skills in a laboratory environment.

CIS 221 Advanced "C"/"C++" Programming **3 Credits**

Prerequisites: CIS 212 - "C"/"C++" Programming. Continues those topics introduced in "C" Language Programming with emphasis on array processing, file processing, and advanced debugging techniques. Provides the opportunity to apply skills in a laboratory environment. This class will also introduce the concept of object oriented programming using the C++ computer language. Differences between C++ and classical C programming will be addressed.

CIS 222 Office Automation **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Presents a perspective on the needs, potentials and urgencies of systems to support modern office functions. Concentrates on structured analysis and design of hardware/software systems for creating, maintaining, printing, and communicating data files utilizing text-processing systems. Covers methodologies for creating procedures to produce letters and reports from data files. Incorporates concepts and techniques into practical applications.

CIS 223 Integrated Business Software **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or program advisor approval. Presents knowledge of integrated microcomputer software concepts. Students design a complete business system utilizing all parts of an integrated microcomputer software package which can share the same data and manipulate it. Includes use of word processing, electronic spreadsheets, graphics, databases, and command languages.

CIS 224 Hardware and Software Troubleshooting **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems. Presents an in-depth analysis of the components of a computer system and their relationship to each other. Includes concepts of parallel and serial connectivity, installation and maintenance of software, peripheral devices, interface cards, and device drivers. Analyzes realistic hardware/software problems encountered in the workplace and techniques and procedures used to implement solutions.

CIS 225 Advanced Database Management Systems **3 Credits**

Prerequisites: CIS 201 - Database Design and Management or CIS 207 - Microcomputer Database Management Systems. Continues CIS 207 Microcomputer Database Management Systems. Emphasizes the development of advanced applications in database management.

CIS 227 Topics in Information Management **3 Credits**

Prerequisites: CIS 102 - Information Systems Fundamentals. Discusses topics of current interest in information management. Includes examples from production, operations, accounting, finance, marketing, sales, and human resources. Focuses on special interest projects. Utilizes field trips, guest speakers, audio-visual activities, and seminars.

CIS 228 Cooperative Education **1-9 Credits**

Prerequisites: Have completed 50% of required major course credits, with at least a 2.5 average in the occupational field of study, as well as a 2.5 overall scholastic average. Provides students with the opportunity to apply concepts learned in the classroom to actual work situations. Requires program Advisor approval.

CIS 229 Seminar I **1 Credit**

Prerequisites: Program advisor approval. Discusses topics of current interest in computerized information management with an emphasis on the application of information management skills during lab time. Various seminar topics may be identified and offered each term under this course number.

CIS 230 Seminar II **2 Credits**

Prerequisites: Program advisor approval. Discusses topics of current interest in computerized information management with emphasis on application of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIS 231 Structured Query Language **3 Credits**

Prerequisites: CIS 201 - Database Design and Management. SQL is now a dominant language used in mainframe, mini, and microcomputer databases (Access, dBASE, paradox, DB2, FoxPro, Oracle, SQL Server, and Btrieve) by diverse groups such as home computer owners, small businesses, large organizations, and programmers. It acts as a bridge between the user, the database management system, the data tables, and transactions involving all three.

CIS 232 Visual Basic Programming **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming and previous experience with Windows-based software. Provides a basic understanding of fundamental concepts involved when using a member of a Windows programming development language. Emphasizes logical program design using a modular approach involving task-oriented program functions. Allows the design of a Windows user interface.

CIS 233 Graphic User Interfaces: Windows **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Provides a foundation of fundamental concepts in the use of Windows-type software. Explores the Windows operating system, accessories and various applications. Develops a proficiency with Windows operations including customizing the environment, integrating applications, and managing files.

CIS 234 XBase Programming Language **3 Credits**

Prerequisites: CIS 113 - Logic, Design, and Programming and programming language experience recommended. Provides a basic understanding of the fundamental concepts involved when using a high-level development database language. Emphasizes logical program design using a modular approach. Provides a sound foundation of fundamental concepts, such as the XBase functions.

CIS 235 Network Fundamentals **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating System and Windows-based training is recommended. Studies local area networks, their topologies and functions. Provides a general understanding of the basic LAN protocols. Covers utilization of application software using a local area network to share resources among network members, transferring files between users, set-up and administration of a network, identification of hardware and software needs and LAN-to-mainframe connectivity.

CIS 240 Introduction to Computer-Integrated Manufacturing **3 Credits**

Prerequisites: None. Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes the planning of a project which will be formally documented and presented by the students and implemented in CIS 241.

CIS 241 Computer-Integrated Manufacturing Project **3 Credits**

Prerequisites: CIS 240 - Introduction to Computer-Integrated Manufacturing. Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

CIS 243 Novell Network Administration I **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems and CIS 235 - Network Fundamentals. Introduces the organization, structure, functions, and administration of a network operating system. This course is designed to train the student in administration of a local area network. Presents network operating system concepts such as file and shared printing, data protection, application installation, and electronic messaging. Concepts will be incorporated into practical applications.

CIS 244 Novell Network Administration II **3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I. Introduces file server management, maintenance, installation, and configuration concepts and techniques. This course is designed to train the student in the tasks required for management and administration of a local area network file server. Presents information on various installation techniques. Concepts will be incorporated into practical applications.

CIS 245 Networking Technologies Concepts **3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I and CIS 244 - Novell Network Administration II. Introduces the basic concepts of computer networking. Describes the services provided by a network and explains the different media used to access network services. The OSI model of computer networks is introduced and a description of each of its layers is provided. The OSI model is compared to several different network systems to demonstrate how the network services fit into the model.

CIS 246 Novell Network Hardware Service and Support **3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I, CIS 244 - Novell Network Administration II, and CIS 245 - Networking Technologies Concepts. Provides hands-on experience in troubleshooting various components of a computer system including memory, hard disk sub-systems, network interface cards, and network cabling. Focuses on the prevention, diagnosis, and resolution of hardware-related networking problems. Several hands-on labs are used to allow the student to develop a diagnostic ability.

CIS 247 Novell Network Administration III **3 Credits**

Prerequisites: CIS 243 - Novell Network Administration I, CIS 244 - Novell Network Administration II, CIS 245 - Networking Technologies Concepts, and CIS 246 - Novell Network Hardware Service and Support. Introduces the student to a mixed operating systems network. Introduces network directory services. Teaches the student how to inter-network two different network operating systems. Directory services troubleshooting and network performances issues are covered. Also covers advanced printing techniques and print server configuration.

CIS 250 Wide Area Networks **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems and CIS 202 - Data Communications. Studies wide area networks, their history, various topologies, and functions. Provides a basic understanding of WAN architecture and protocols and their relationship to international standards. Topics include: telephone networks, digital telecommunication technologies (ATM, ISDN, and Broadband ISDN), data transport technologies, wireless WAN technologies, enterprise networks, electronic data interchange, the OSI and SNA models, client-server applications on a WAN, data security and integrity, and network management. Also provides an in-depth look at the Internet and World Wide Web including Internet tools and services, scripting languages, and addressing.

CIS 251 Advanced Operating Systems **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating System. Studies advanced topics in operating systems as they apply to Networking application.

CIS 252 Create an Internet/World Wide Web Site **3 Credits**

Prerequisites: CIS 202 - Data Communications or program advisor approval and CIS 235 - Network Fundamentals. Creates a business or personal external World Wide Web presence and uses Web technology internally as a Local Area Network. Sets up a server, obtains an Internet connection, creates Web pages, applications, and maintains the server. Creates a professional and successful World Wide Web site.

CIS 253 Graphic Image Lab **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or program advisor approval. A fundamental course which introduces students to computer graphic design. The beginning focus of the course is on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. These skills are then developed by creating animation, graphics presentations, and graphics manipulations.

CIS 254 GUI and WWW **3 Credits**

Prerequisites: Previous knowledge of Windows 3.X - Office software; CIS 233 - Graphic User Interfaces: Windows and CIS 232 Visual Basic Programming helpful. Provides a foundation of fundamental concepts in the use of GUI software. Employs a document-centric approach using all the main applications of Windows-Based Operating Systems and Windows-Based Applications, but integrates the use of the World Wide Web to increase the quality of the output.

CIS 255 Network Operating Systems **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems or program advisor approval. Provides access to many client computers through the hardware and software on each computer. Delivers a view of four primary Network Operating Systems used in the workplace today. It also provides a detailed study with hands-on laboratory exercises that promote an understanding and installation of Network Operating Systems. A special emphasis on Novell (v3.12), (v.4.01), Microsoft NT (v.3.51 and 4.0), and Unix (Linus) are provided. Students learn how to plan and install the operating system and client workstations.

CIS 256 LAN/Data Communications **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems or advisor approval, Windows-based training is recommended. Draws on practical examples to explain technical concepts of data communications. Provides a practical understanding of relevant terminology, concepts, hardware, software, protocols, architectures, and other information needed to assist the student in grasping the ever-changing world of data communications. In addition, it also provides a look at networks (LAN) and wide area networks (WAN) and explores planning and analyzing communications systems.

CIS 258 Network Communication and Connectivity **3 Credits**

Prerequisites: CIS 235 - Network Fundamentals and CIS 243 - Novell Network Administration I. Although networking hardware and software are constantly changing, this course presents a detailed view and analysis of the mechanics and protocols used in computer networks. TCP/IP protocols have taken over where OSI protocols have left off. This course attempts to analyze the TCP/IP model and its close association with the Internet and ATM networks.

CIS 263 NT Network Administration I **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems and CIS 202 - Data Communications. Introduces the organization, structure, functions, and administration of a network operating system. This course is designed to train the student in administration of a local area network. Presents network operating system concepts such as file and shared printing, data protection, application installation, and electronic messaging. Concepts will be incorporated into practical application.

CIS 264 Windows NT Advanced Network Administration **3 Credits**

Prerequisites: CIS 263 - NT Network Administration I. Introduces file server management, maintenance, installation, and configuration concepts and techniques. This course is designed to train the student in the tasks required for management and administration of a local area network file server. Presents information on various installation techniques. Concepts will be incorporated into practical applications.

CIS 266 Windows NT Network Hardware Service and Support **3 Credits**

Prerequisites: CIS 264 - Windows NT Advanced Network Administration. Provides hands-on experience in troubleshooting various components of a computer system including memory, hard disk sub-systems, network interface cards and network cabling. Focuses on the prevention, diagnosis and resolution of hardware-related networking problems. Several hands-on labs are used to allow the students to develop a diagnostic ability.

CIS 273 Network Administration **3 Credits**

Prerequisites: CIS 106 - Microcomputer Operating Systems and CIS 202 - Data Communications. Introduces the organization, structure, functions, and administration of a network operating system. This course is designed to train the student in administration of local area networks. Presents network operating system concepts such as file and shared printing, data protection, application installation, and electronic messaging. Concepts will be incorporated into practical applications.

CIS 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

CIS 281-293 Special Topics in Computer Information Systems **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CON 101 Introduction to Construction Technology **3 Credits**

Prerequisites: None. Presents history of building construction to present-day applications emphasizing future trends and construction as a career. Provides practice in the operation, maintenance, and safety of various tools including the builder's level and transit.

CON 106 Construction Blueprint Reading I **3 Credits**

Prerequisites: None. Provides instruction and practice in the use of working drawings and applications from the print to the work. Includes relationship of views and details, interpretation of dimension, transposing scale, tolerance, electrical symbols, sections, materials list, architectural plans, room schedules, and plot plans.

CON 204 Estimating and Specifications **3 Credits**

Prerequisites: None. Presents the student with the estimating process for residential construction. Emphasizes reading blueprints and specifications, estimating labor, materials take-off, and pricing.

CON 281-293 Special Topics in Construction Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CTR 114 ON/OFF/Institutional Catering **3 Credits**

Prerequisites: None. Provides an overview of the catering styles/types that exist. Covers techniques of production, service, and showmanship.

CTR 214 Catering Administration **3 Credits**

Prerequisites: None. Teaches the correct procedures in event bookings, contracts, recordkeeping, and event follow-up. Covers fringe services development, human resource issues, and cost control techniques.

CUL 105 Institutional Food Service **2 Credits**

Prerequisites: None. Introduces students to the variety of institutional food service facilities. Includes converting recipes for quantity food production, calculating per portion cost, and determining profitable selling price.

CUL 110 Meat Cutting **2 Credits**

Prerequisites: None. Introduces meat cutting. The student will gain knowledge in the breakdown of beef, pork, poultry, lamb, and veal.

CUL 202 Specialized Cuisine **3 Credits**

Prerequisites: 4th semester class. Introduces students to foods from various cultures. Provides a background in the history of foods from various countries and develops food preparation skills. Covers table service and tableside food preparation.

CUL 211 Classical Cuisine **3 Credits**

Prerequisites: None. Presents advanced and sophisticated classical culinary methods following the principles and techniques of Escoffier. Studies cooking techniques, timing, presentation, history, and terms pertaining to classical foods and menus, with emphasis on French cuisines. Provides practical experience in table service operation, kitchen coordination, and timing.

CUL 212 Fish and Seafood **2 Credits**

Prerequisites: HOS 109 - Hospitality Purchasing. Discusses the importance of fish and seafood in today's market. Includes types and categories of American and imported fish and shellfish, and proper buying, storage, preparation, and merchandising of fish and seafood. Provides experience in boning, cutting, and cooking methods appropriate for seafood.

DCT 101 Basic Drafting **3 Credits**

Prerequisites: None. Introduces basic mechanical drafting techniques.

DCT 104 Product Drafting **3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals or advisor approval. Introduces the set concept of working drawings both in detailing and assembly. Presents fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits, and the use of parts lists, titles, and revision blocks. Introduces the basics of product design and the design process.

DCT 105 Facilities Design and Layout **3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Focuses on the architectural drawings of commercial or industrial buildings. Covers problems of space planning, design, materials, HVAC systems, and construction methods. Develops working drawings and presentation drawings. Requires oral presentations and discussions. Requires students to complete research on a limited number of construction materials and methods.

DCT 107 Advanced CAD **3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Instructs students in fundamentals of 3-D modeling for design. Includes overview of modeling, types, graphic manipulation, part structuring, coordinate systems, and developing strategy of model geometry.

DCT 108 Residential Drafting **3 Credits**

Prerequisites: Advisor approval. Covers residential planning and drafting. Includes interior planning, structural design, and development of working drawings. Provides opportunity for students to design a residence using accepted building standards from information given in class.

DCT 109 Construction Materials and Specifications **3 Credits**

Prerequisites: None. Introduces various construction materials, composition, and application. Studies specifications of materials, construction contracts, and applications required in the building industry.

DCT 110 Architectural Rendering **3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Presents a survey and history of pictorial drawings. Studies light and color, rendering media, and application of different techniques and media through a series of exercises.

DCT 113 Intermediate CAD **3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals, TEC 104 - Computer Fundamentals for Technology. Continues study of CAD fundamentals. Focuses on advanced CAD features and various methods of customizing CAD systems.

DCT 201 Schematic Drafting **3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals. Corequisites: DCT 206 - Mechanical and Electrical Equipment. Presents the systematic layout of various types of schematic drawing done by a draftsperson. Requires students to prepare finished drawings for manufacture or installation of plumbing, heating, electrical, electronic, and fluid-power type drawing.

DCT 202 CAD Programming Language **3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals. Covers use of computer language to program commands for CAD.

DCT 204 Architectural CAD **3 Credits**

Prerequisites: TEC 102 - Technical Graphics, TEC 104 - Computer Fundamentals for Technology. Presents advanced computer-aided design topics, including architectural design. Includes all necessary drawings needed for the construction process.

DCT 205 Introduction to Plastics **3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces students to the major plastic processing industries, techniques, and most widely used plastic polymers, their applications, and properties.

DCT 206 Mechanical and Electrical Equipment **3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra or MAT 131 - Algebra/Trigonometry I. Focuses on mechanical and electrical requirements for a structure. Studies electrical load calculations, wire sizing, and circuits. Calculates plumbing requirements, fixture units, and pipe sizing. Includes heating systems, duct layout, and sizing.

DCT 207 Die Design Drafting **3 Credits**

Prerequisites: DCT 104 - Product Drafting, TEC 101 - Manufacturing Processes. Studies the drafting, detailing, and design of blanking, piercing, and forming dies. Covers material reaction to shear, cutting clearances, and nest gauging.

DCT 208 Structural Detailing **3 Credits**

Prerequisites: TEC 102 - Technical Graphics, DSN 103 - CAD Fundamentals, DCT 109 - Construction Materials and Specifications and Advisor approval. Focuses on detailing commercial structural members, their connections, materials, and methods of construction. Concentrates on traditional materials, such as reinforced concrete, masonry, steel, and timber.

DCT 209 Estimating/CAD **3 Credits**

Prerequisites: DCT 204 - Architectural CAD, DCT 108 - Residential Drafting. Introduces estimating procedures used in the building industry. Studies material takeoffs, estimating overhead expenses, contingencies, labor, and equipment. Involves the use of computers to generate takeoffs and to set pricing.

DCT 210 Surveying I **3 Credits**

Prerequisites: MAT 121 - Geometry/Trigonometry or MAT 131 - Algebra/Trigonometry I. Introduces surveying equipment, procedures for performing measurements, turning angles, determining grades, and other field applications. Covers surveying techniques and computations using the level, chain and transit in calculating areas, lines, and grades.

DCT 211 Commercial Structures I **3 Credits**

Prerequisites: DCT 204 - Architectural CAD, DCT 108 - Residential Drafting. Focuses on planning and drawing commercial structures. Uses a presentation drawing and working drawing for concrete structures and steel structures.

DCT 212 Commercial Structures II **3 Credits**

Prerequisites: DCT 211 - Commercial Structures I. Focuses on planning and drawing commercial structures. Uses working drawings for pre-engineered and concrete/steel structures.

DCT 213 CAD Mapping **3 Credits**

Prerequisites: DSN 103 - CAD Fundamentals, DCT 210 - Surveying I. Covers the concepts of map making with computer-aided drafting and typical drafting media found in the industry. Studies civil engineering applications of mapping procedures including profiles, topography, and site plans.

DCT 214 Machine Design **3 Credits**

Prerequisites: DCT 104 - Product Drafting, MAT 111 - Intermediate Algebra or MAT 131 - Algebra/Trigonometry I. Presents practical solutions to mechanical design problems. Studies the design of machine elements including shafts, bearings, keys, pins, and springs. Includes the geometry and drafting of cams and gears and the study of linkages.

DCT 215 Electronic Drafting/CAD **3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Introduces students to electronic schematics, drill indexing, and printed circuit board design. Emphasizes the creation and manipulation of basic symbols, connection diagrams, block and logic diagrams, including the use of figure parts, and data extract.

DCT 216 Jig and Fixture Design **3 Credits**

Prerequisites: DCT 104 - Product Drafting and TEC 101 - Manufacturing Processes. Introduces the processes of drafting and design as applied to tooling. Emphasizes tooling, locators, supports, holding devices, clearances, and design as it pertains to jig and fixtures.

DCT 217 Product Design **3 Credits**

Prerequisites: DCT 104 - Product Drafting and DSN 222 - Strength of Materials. Provides the student an opportunity to apply all previously acquired knowledge in product drafting to the design of a new or existing consumer product. Considers the function, aesthetics, cost economics, and marketability of the product. Requires a research paper and product illustration.

DCT 218 CAD/CAM Design **3 Credits**

Prerequisites: DSN 220 - Advanced CAD. Covers the development of various machine routines. Studies the control of the CNC mill and lathe. Includes material handling and robotics.

DCT 227 Geometric Dimensioning and Tolerancing **3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces the fundamental principles of geometric dimensioning and tolerancing according to the latest ANSI standards. Applies geometric dimensioning and tolerancing symbols along with tolerances of form, profile, orientation, run-out, and location.

DCT 228 Civil I **3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Explores the engineering field. Presents an overview of infrastructure design, including the study of roadways and drainage systems. Emphasizes site development and highway planning.

DCT 229 Civil II **3 Credits**

Prerequisites: DCT 228 - Civil I. Presents construction management techniques, including scheduling, and contracts. Studies soil properties and paving methods. Examines practical construction considerations.

DCT 230 Computer Rendering and Animation **3 Credits**

Prerequisites: DSN 220 - Advanced CAD. Instructs students in fundamentals of computer generalized renderings and animations using 3-D Studio software and its components.

DCT 240 Introduction to Computer-Integrated Manufacturing **3 Credits**

Prerequisites: Advisor approval. Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes the planning of a project which will be formally documented and presented by students and implemented in DCT 241.

DCT 241 Computer-Integrated Manufacturing Project **3 Credits**

Prerequisites: DCT 240 - Introduction to Computer-Integrated Manufacturing. Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

DEN 102 Dental Materials and Laboratory I **3 Credits**

Prerequisites: Admission to Dental Assistant Program. Reviews properties of dental materials, proper modes of manipulation, necessary armamentarium used and technical duties which dental assistants perform. Stresses clinical behavior of materials and biological factors of importance to dental assistants.

DEN 108 Preventive Dentistry/Diet and Nutrition **3 Credits**

Prerequisites: DEN 123 – Dental Anatomy. Emphasizes importance of preventive dentistry and effects of diet and nutrition on dental health. Presents techniques of assisting patients in the maintenance of good oral hygiene.

DEN 115 Preclinical Practice I **4 Credits**

Prerequisites: Admission to the Dental Assistant Program. Introduces qualifications and legal-ethical requirements of the dental assistant. History and professional organizations are surveyed. Emphasizes clinical environment and responsibilities, chair-side assisting, equipment and instrument identification, tray setups, sterilization, characteristics of microorganisms and disease control.

DEN 116 Dental Emergencies/Pharmacology **2 Credits**

Prerequisites: None. Surveys the most commonly utilized and required first aid measures for emergencies. Examines proper techniques and procedures as well as equipment, medications, and position care of the patient. Reviews anatomy/physiology and cardiopulmonary rescue as provided by the American Heart Association.

DEN 117 Dental Office Management **2 Credits**

Prerequisites: Admission to the Dental Assistant Program. Explores principles of administrative planning, bookkeeping, filing, recall programs, banking, tax records, computer software, insurance, office practice and management as related to the dental office. Attention is given to techniques of appointment control, record keeping, and credit and payment plans.

DEN 118 Dental Radiography **4 Credits**

Prerequisites: DEN 123 – Dental Anatomy and DEN 115 – Preclinical Practice I. Concentrates on principles, benefits, effects, and control of X-ray production. Covers history, radiation sources, modern dental radiographic equipment and techniques, anatomical landmarks, dental films, and processing. Emphasizes avoidance of errors while exposing and processing dental radiographs.

DEN 121 Clinical Practicum II **7 Credits**

Prerequisites: Required courses of Dental Assistant program prior to summer session. A clinical learning experience that provides increased practical chair-side dental assisting experience to be gained from community service and private dental practices in general and specialty areas of dentistry. Opportunity for increased skill development in clinical support and business office procedures also provided. Weekly seminars are included as an integral part of the learning experience.

DEN 122 Clinical Practicum I **3 Credits**

Prerequisites: DEN 102 - Dental Materials and Laboratory I, DEN 115 - Preclinical Practice I, DEN 116 - Dental Emergencies/Pharmacology, and DEN 123 - Dental Anatomy. Performance of chairside skills are applied in a clinical office situation on live patients.

DEN 123 Dental Anatomy **2 Credits**

Prerequisites: None. Focuses on oral, head and neck anatomy, basic embryology, histology, tooth morphology, and charting dental surfaces related to the dental field. Includes dental anomalies, pathological conditions, and terminology relevant to effective communication.

DEN 125 Preclinical Practice II **3 Credits**

Prerequisites: None. Continues Preclinical Practice I. Anesthesia is presented. The following dental specialties are presented: Oral and Maxillogical Surgery, Periodontics, Endodontics, Pediatric Dentistry, Orthodontics, Prosthodontics, and Dental Public Health.

DEN 129 Dental Materials and Laboratory II **3 Credits**

Prerequisites: DEN 102 – Dental Materials and Laboratory I. Continues Dental Materials and Laboratory I.

DEN 131 Basic Integrated Science **2 Credits**

Prerequisites: None. Examines the human body as an integrated unit. Includes anatomy, physiology, and medical terminology.

DSN 103 CAD Fundamentals **3 Credits**

Prerequisites: None. Corequisites: TEC 102 - Technical Graphics or advisor approval. Introduces fundamentals of CAD (Computer-Aided Drafting). Includes overview of CAD and systems, use of software, and plotter applications.Each student will complete an individual project by the end of the semester.

DSN 106 Descriptive Geometry **3 Credits**

Prerequisites: TEC 102 - Technical Graphics. Introduces fundamental principles in developing graphical solutions to engineering problems. Covers true length, piercing points on a plane, line intersections, true shapes, revolutions, and developments using successive auxiliary views.

DSN 220 Advanced CAD **3 Credits**

Prerequisites: TEC 102 - Technical Graphics and DSN 103 - CAD Fundamentals. Focuses on advanced CAD features, including fundamentals of three-dimensional modeling for design. Includes overview of modeling, graphic manipulation, part structuring, coordinate system, and developing strategy of model geometry.

DSN 221 Statics **3 Credits**

Prerequisites: PHY 101 - Physics I, MAT 121 - Intermediate Algebra or MAT 131 - Algebra/Trigonometry I. Studies applied mechanics dealing with bodies at rest. Covers units, vectors, forces, equilibrium, moments and couples, planar force systems, distributed forces, analysis of structures (trusses and frames), and friction.

DSN 222 Strength of Materials **3 Credits**

Prerequisites: DSN 221 - Statics. Studies internal stresses and physical deformations caused by externally applied loads to structural members. Covers stress and strain, shear stress, properties of areas, shearing force and bending moment, deformation of beams, columns, and combined stresses. Teaches various materials' physical and mechanical properties.

DSN 280 Co-op/Internship **3 Credits**

Prerequisites: Students must have completed a minimum of 30 credits toward their degree with at least a 3.0 cumulative grade point average. Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

DSN 281-293 Special Topics in Design Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ELT 120 Introduction to Electronics **3 Credits**

Prerequisites: MAT 050 - Basic Algebra. Provides the student with limited preparatory study and entry into program level content. Topics include laboratory skills, basic manipulative skills, interpretation of diagrams and hand soldering techniques. Emphasis is placed upon the use of Electronic Work Bench software to model and analyze electronic components and circuits.

ELT 121 Circuits I **3 Credits**

Prerequisites: None. Introduces the basics of electricity and electronics. Covers DC circuits. Uses lab work to stress the use of test equipment. Discusses resistance, magnetism, series circuits, parallel circuits, Ohm's Law, Kirchhoff's Laws and circuit analysis (superposition, Theveinin, etc.).

ELT 122 Circuits II **3 Credits**

Prerequisites: ELT 121 - Circuits I, MAT 131 - Algebra/Trigonometry I. Studies electrical principles and laws pertaining to alternating current and voltage. Covers AC network theorems, operator, phasors, reactances, impedances, phase relationships, power, resonance, transformers, polyphase, and filter circuits.

ELT 123 Circuits Lab **2 Credits**

Prerequisites: ELT 121 - Circuits I, MAT 131 - Algebra/Trigonometry I. Uses laboratory experiences to enhance and confirm the theories and practices discussed in Circuits I. Provides hands-on training in the use of shop test equipment. Presents troubleshooting skills and care of equipment relevant to electronics.

ELT 124 Digital I **3 Credits**

Prerequisites: None. Introduces digital electronics, including logic gates and combinational logic circuits. Studies binary arithmetic, Boolean algebra, mapping techniques, digital encoders and decoders, multiplexers and demultiplexers, and arithmetic circuits. Uses SSI and MSI digital integrated circuits.

ELT 125 Digital II **3 Credits**

Prerequisites: ELT 124 - Digital I. Offers advanced study of digital systems, including memory and D/A conversion. Covers construction of specified timing circuits, design driver/display systems, selected register design, counters and arithmetic circuits and validation of operation. Studies hardware and general microprocessor system organization.

ELT 126 Solid State I **3 Credits**

Prerequisites: MAT 131 - Algebra/Trigonometry I, or MAT 134 - Trigonometry, ELT 122 - Circuits II (may be corequisite). Studies characteristics and applications of semiconductor devices and circuits. Covers signal and rectifying diodes, bipolar transistors, rectification, single and multistage amplifiers, AC/DC load lines, biasing techniques, equivalent circuits and power amplifiers.

ELT 127 Industrial Electronics **3 Credits**

Prerequisites: ELT 126 - Solid State I. Presents overview of electronics in the industrial setting. Instructs students in how electronics is applied to industrial systems. Introduces power machines, polyphase systems, solid state controls, transducers, and industrial computer systems.

ELT 128 Introduction to Lasers **3 Credits**

Prerequisites: MAT 131 - Algebra/Trigonometry I. Introduces laser action, laser beam characteristics, types of lasers, safety considerations, general laser applications, laser and optical equipment. Teaches basics of laser, laser systems and prepares beginning laser students for future courses.

ELT 129 Laser and Optical Measurements **3 Credits**

Prerequisites: None. Examines the instrumentation available for evaluating the characteristics of laser light. Includes introduction to radiometry/photometry and typical energy/power detectors. Discusses photographic recording mediums and import optical measuring instruments (spectrometers, monochromators, inteferometers and spectrophotometers). Stresses hands-on experience with current optical equipment used in measurement and analysis of CW and pulsed laser beams.

ELT 130 Fiber Optics **3 Credits**

Corequisites: ELT 122 - Circuits II. Presents overview of fiber optics. Studies uses for fiber optics, advantages, cable details, connectors, splices, sources, detectors, and fiber optic systems.

ELT 131 Satellite Communications **3 Credits**

Prerequisites: ELT 230 - Advanced Communications Electronics. Presents theory of satellite operations, site perimeters for and methods of site preparation and installation of satellite dish. Aids in making a decision as to which type of dish to use for a particular installation.

ELT 203 Introduction to Industrial Controls **3 Credits**

Prerequisites: ELT 221 - Solid State II, ELT 223 - Electrical Machines. Studies basics of controls related to industrial electronics. Includes basic and pilot control devices such as circuit layouts, industrial schematics, reduced voltage starters and multi-speed controllers. Covers transformer hook-ups and circuit protection.

ELT 206 Analog Troubleshooting Techniques **3 Credits**

Prerequisites: ELT 228 - Communications Electronics. Studies techniques for logical troubleshooting of electronic circuits and simple systems with emphasis on systematic diagnostic methods, signal tracing and signal injection methods. Provides experience in use of test equipment and electronic communication skills.

ELT 207 Digital Troubleshooting Techniques **3 Credits**

Prerequisites: ELT 222 - Microprocessors. Studies techniques for logical troubleshooting of microcomputers. Includes modal testers, microcomputer controlled testers, static stimulus testers, signature analysis, and logic analyzers. Emphasizes system oriented troubleshooting procedures.

ELT 210 VCR Theory **3 Credits**

Prerequisites: None. Studies video cassette recorder theory with VDR troubleshooting techniques and VCR test equipment usage. Provides instruction in diagnostic testing through signal injection and signal tracing, emphasizing recording, playback and servo circuits. Provides students with quantitative and qualitative knowledge of the fundamental principles and terms used in VCR theory and repair.

ELT 211 Wave Optics and Components **3 Credits**

Prerequisites: ELT 228 - Communications Electronics. Treats the wave nature of light as manifested in interference, diffraction and polarization phenomena in optical systems. Analyzes and uses optical components that modify, control, or detect light. Includes discussion of light source, wave nature of light interference, diffraction, polarization, holography, beam splitters, filters, isolators, gratings, polarizers and non-linear optical materials. Stresses hands-on experience in application/evaluation of wave optic devices in typical optical systems.

ELT 212 Networking **3 Credits**

Prerequisites: None. Studies types of protocol used in data communication systems. Includes an overview of networking, networking control, and interfacing. Emphasizes protocols, packet switching systems, and local area networks.

ELT 214 Industrial Instrumentation **3 Credits**

Prerequisites: ELT 126 - Solid State I. Emphasizes precision measurement via pressure, strain, force, flow, and level gauges. Covers the related probes, sensors, transducers, computer interfaces, computer hardware and peripherals. and computer software necessary for the acquisition, summarization, analysis and presentation of data.

ELT 215 Laser Systems and Applications **3 Credits**

Prerequisites: ELT 122 - Circuits II, ELT 128 - Introduction to Lasers, ELT 240 - Optics. Provides an in-depth coverage of laser types and applications. Focuses on ion, molecular, liquid, solid state and semi-conductor lasers with specific attention given to Nd:YAG, Ruby, CO_2 and gallium arsenide. Discusses flash lamps, power supplies (CW and pulsed), and energy transfer mechanisms for each laser type. Examines other parts of laser systems, including electro-optic and acousto-optic modulators, Q-switching, mode locking, and mechanical and bleachable dye methods. Includes a description of lasers in medicine, surgery, dentistry, communications, range finding, alignment tracking, welding, cutting, drilling, data recording, and display. Stresses hands-on operation and trouble shooting of each laser type and small-scale examples of applications.

ELT 216 Laser and Optical Measurements **3 Credits**

Prerequisites: None. Examines the instruments and methods available for evaluating laser light and supporting optical equipment (lenses, mirrors, etc.). Includes an introduction to radiometry/photometry and typical energy/power detectors. Photographic recording mediums and important optical measuring instruments (spectrometers, spectrophotometers, monochromators and interferometers) and methods (interference and non-interference testing) are also discussed. Laboratory experiments stress hands-on experience with current optical measuring equipment and methods.

ELT 217 Laser Projects **3 Credits**

Prerequisites: Advisor approval. Provides students with an opportunity to work on individual projects directly with the instructor to build laser-related project(s).

ELT 218 Geometrical Optics **3 Credits**

Prerequisites: Advisor approval. Applies mathematical and graphical techniques to the reflection/refraction of light at typical optical surfaces. Analyzes and uses typical optical components. Includes discussion of ray tracing, imaging with lenses, F-stops and apertures, mirrors, lenses, prisms, windows, optical flats, matric optics, etalons, beam expanders, collimators and autocollimators, optical tables, optical supports, optical systems, and photographic components.

ELT 219 Biomedical Electronics I **3 Credits**

Prerequisites: ELT 125 - Digital II. Offers further study of medical electronics equipment, including ECG, EEG, defibrillators, heart monitors, and other monitoring and respiratory equipment.

ELT 220 Biomedical Electronics II **3 Credits**

Prerequisites: ELT 219 - Biomedical Electronics I. Studies medical support systems including x-ray equipment, respirators and analyzers, and their maintenance. Studies medical ultra-sound, electrosurgery units, and mechanical recorders. Prepares students for licensing and certification.

ELT 221 Solid State II **3 Credits**

Prerequisites: ELT 126 - Solid State I. Studies applications of special-purpose diodes, thyristors, and unipolar transistors. Discusses frequency effects and responses of amplifiers. Includes discreet SCRS, UJTs, FETs, oscillators, linear regulated power supplies, switching regulators, and power amplifiers. Introduces op-amps.

ELT 222 Microprocessors **3 Credits**

Prerequisites: TEC 104 - Computer Fundamentals for Technology, ELT 125 - Digital II. Introduces microprocessor system organization, operation, design, troubleshooting, and programming. Investigates and analyzes a microprocessor instruction set for its operation. Includes programming and interfacing a microprocessor.

ELT 223 Electrical Machines **3 Credits**

Prerequisites: ELT 122 - Circuits II, MAT 131 - Algebra/Trigonometry I. Provides an overview of electrical machines and how they relate to industrial electronics. Gives industrial electronics technicians insight into electrical power generation, polyphase system, transformers, all types of electrical motors, power factor and power factor correction, back-up power, and electrical power monitoring.

ELT 224 Linear Integrated Circuit Application **3 Credits**

Prerequisites: ELT 221 - Solid State II. Introduces operational amplifiers (op-amps), characteristics, and operations. Includes op-amp active filters, amplifiers, regulators, comparators, timers, oscillators, and phase-locked loops.

ELT 225 Introduction to National Electrical Code **3 Credits**

Prerequisites: None. Introduces the role and use of the National Electrical Code Book. Provides an overview of interpretation, calculations, and revisions of the code book.

ELT 226 Computer Troubleshooting **3 Credits**

Prerequisites: ELT 222 - Microprocessors. Studies techniques for logical troubleshooting of microcomputers. Emphasizes system-oriented troubleshooting procedures.

ELT 227 Peripherals **3 Credits**

Prerequisites: ELT 226 - Computer Troubleshooting. Studies peripherals commonly used with computers and microcomputers interfacing with these peripherals. Includes a study of data communications hardware and techniques. Studies the design of circuits to interface microprocessors with industrial equipment. Includes microcomputer systems interfacing with input and output transducers for control systems. Studies techniques for logical troubleshooting of microcomputer systems.

ELT 228 Communications Electronics **3 Credits**

Corequisites: ELT 221 - Solid State II. Analyzes communication circuits with emphasis on AM, FM, SSB, and stereo transmitter and receiver systems. Includes noise modulation and demodulation principles, phase-locked loop, RF amplifiers, automatic gain control, detectors, limiters, and discriminators. Offers hands-on lab exposure to analog circuits utilizing analysis and troubleshooting techniques.

ELT 229 Telecommunications **3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 126 - Solid State I. Examines various methods in transmitting digital data from one location to another. Covers time and frequency division multiplexing. Includes pulse-code and delta modulation, telemetry, error detection, and correction and simple networks. Covers techniques for logical troubleshooting of telephonic systems.

ELT 230 Advanced Communications Electronics **3 Credits**

Prerequisites: ELT 228 - Communications Electronics. Introduces antenna principles and wave propagation and an in-depth study of matching techniques for transmission lines. Includes the Smith Chart and a thorough study of television operation. Measures radiation patterns with different antenna arrays. Practices digital and analog troubleshooting techniques.

ELT 231 Microwave Communications **3 Credits**

Prerequisites: ELT 230 - Advanced Communications Electronics. Studies microwave transmission lines, waveguides, waveguide components, including hybrid couplers, attenuators, microwave filters, phase shifters, T-junctions, irises and microwave tubes.

ELT 233 Industrial Motors and Controls **3 Credits**

Prerequisites: ELT 122 - Circuits II, AMT 201 - Manufacturing Systems Control (PLCs). Provides a complete understanding of basic ladder and wiring diagrams used in the control of electric motors. Includes the various electrical components and their functions as applied to motor controls. Topics include the various types of motors used in applying electro-mechanical power, ranging from small AC shaded-pole fan motors through larger three-phase motors. Motor starting components, protective devices, heat dissipation, motor slippage and frequency, and multi-speed motors are discussed. Lab assignments allow the student a hands-on approach to wiring various control components in the operation of three-phase motors.

ELT 234 Advanced Problem Solving **3 Credits**

Prerequisites: ELT 125 - Digital II. Corequisites: ELT 221 - Solid State II, ELT 224 - Linear Integrated Circuit Applications. Introduces logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods and technical reference research. Provides further experience in the use of test equipment and proper repair techniques. Includes job preparedness skills and preparation for appropriate certification testing.

ELT 235 Process Control **3 Credits**

Prerequisites: ELT 224 - Linear Integrated Circuit Applications. Covers theory and applications of process control including the principles of PID, feedback, open loop and closed loop systems and typical process control applications.

ELT 237 Calibrations **3 Credits**

Corequisites or Prerequisites: ELT 122 - Circuits II. Provides training in dismantling and calibration of instruments (electronic and pneumatic) found in industry, including DP cells, pH and oxygen analyzers, valve positioners, thermocouple circuits and controllers and control valves.

ELT 238 Process Instrumentation **3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 221 - Solid State II. Presents the concepts and fundamentals of measurement instrumentation and its application to industrial process control.

ELT 239 Troubleshooting Techniques **3 Credits**

Prerequisites: ELT 125 - Digital II, ELT 221 - Solid State II, ELT 233 - Industrial Motors and Controls, and approval of program chair. Introduces techniques of logical troubleshooting of electronic circuits and systems with emphasis on systematic diagnostic methods, signal tracing, and signal injection methods. Provides further experience in the use of test equipment and proper repair techniques. Class sessions will consist of lecture, discussion, and problem recitation. Problem-solving and laboratory assignments will reinforce concepts in the reading and lecture experience.

ELT 240 Optics **3 Credits**

Prerequisites: None. Discusses principles of optics emphasizing geometrical and physical optics. Includes interference, reflection, refraction, polarization, diffraction, and birefringence. Discusses devices used in experiments including lenses, diffraction grating, polarization filters, prisms, mirrors and etalons.

ELT 242 FCC License Preparation **1 Credit**

Prerequisites: ELT 228 - Communications Electronics. Provides an in-depth review of the topics covered in the test for a Federal Communications Commission (FCC) license. Emphasizes DC and AC electronics, solid state electronics, test and measurement instruments, communications principles and FCC rules and regulations.

ELT 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

ELT 281-293 Special Topics in Electronics Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ENV 101 Introduction to Environmental Technology **3 Credits**

Prerequisites: None. Provides students with an overview of pollution problems involving water, air, solid waste, radiation, population, and noise. Discusses current national and international problems and concerns.

ENV 102 Environmental Management **3 Credits**

Prerequisites: None. Introduces the political process of environmental law.

ENV 103 Environmental Chemistry **3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Provides hands-on laboratory training in the application of EPA and state-required permit parameters to determine facility compliance. Reviews sampling techniques and preservation methods and basic statistical quality control analysis.

ENV 104 Plant Operations—Sanitary **3 Credits**

Prerequisites: Advisor approval. Provides the basic principles of aerobic and anaerobic biological treatment processes, including activated sludge, trickling filters, lagoons, sludge handling, and disinfection. Reviews state and federal regulations related to wastewater plants.

ENV 105 Air Management **3 Credits**

Prerequisites: None. Focuses on understanding air pollution sources, effects, and treatment technologies.

ENV 106 Water **3 Credits**

Prerequisites: ENV 103 - Environmental Chemistry. Introduces the basic treatment processes of water supplies including coagulation, sedimentation, filtration, chemical dosage, taste, and odor control.

ENV 107 Applied Research I **3 Credits**

Prerequisites: Advisor approval. Requires completion of a special project or case study specifically related to the occupational area. Serves as a field project within the framework of actual working experience in business or industry or a research case study including data collection and data analysis.

ENV 108 Engineering Properties of Earth Materials **3 Credits**

Prerequisites: None. Emphasizes the influences of soils and geologic structures on ground water flow and facility site selection.

ENV 109 Water Supply **3 Credits**

Prerequisites: None. Covers the elementary engineering aspects of water supply and distribution and maintenance of collection systems.

ENV 202 Applied Research II **3 Credits**

Prerequisites: ENV 107 - Applied Research I. Requires completion of a special project or case study specifically related to the occupational area. Serves as a field project within the framework of actual working experience in business or industry or a research case study including data collection and data analysis.

ENV 203 Environmental Microbiology **3 Credits**

Prerequisites: BIO 211 - General Microbiology and ENV 103 - Environmental Chemistry. Continues the study of micro-organisms with emphasis on water, wastewater and related public health and stream sanitation problems. Includes laboratory exercises on bacteriological techniques in the analysis of samples for numbers, types and effects of microbes in the degradation, and/or rehabilitation of our air, food, and water supplies.

ENV 204 Basic Fluid Mechanics **3 Credits**

Prerequisites: None. Introduces the principles of flow measurement, metering in closed conduits, open channels, streams, storm run-off, pump characteristics, and air flow.

ENV 208 Plant Operations—Industrial **3 Credits**

Prerequisites: Advisor approval. Covers wastewater treatment processes including coagulation, sedimentation, activated sludge, neutralization, equalization, and cyanide and chromate removal. Presents instrumentation, maintenance, and troubleshooting. Includes operations, laboratory testing, and associated mathematics.

ENV 212 Solids Handling and Disposal **3 Credits**

Prerequisites: ENV 101 - Introduction to Environmental Technology. Introduces the theory, equipment, and operational procedures of a variety of sludge treatment and disposal techniques. Covers processes, equipment, process management, and process control for sludge volume reduction, solids reduction, conditioning, stabilization, and solids disposal.

ENV 213 Air Pollution Control II **3 Credits**

Prerequisites: ENV 105 - Air Management. Provides an in-depth study of various air quality analyses and modeling techniques.

ENV 214 Environmental Regulations **3 Credits**

Prerequisites: None. Surveys the major current environmental regulations.

ENV 215 Waste Disposal **3 Credits**

Prerequisites: ENV 212 - Solids Handling and Disposal. Provides students with a basic understanding of solid and hazardous waste disposal problems.

ENV 216 Environmental Chemistry II **2 Credits**

Prerequisites: ENV 103 - Environmental Chemistry. Studies the analysis of metals and organics. Includes the operation of atomic absorption, gas and liquid chromatography, and mass spectrophotometers.

ENV 280 Co-op/Internship **1-6 Credits**

Prerequisites: Departmental approval. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

FST 101 Introduction to Food Preparation **3 Credits**

Corequisites: HOS 101 - Sanitation and First Aid. An introduction to preparation principles, nutrition, and menu writing. Emphasis is placed on basic food preparation techniques, food interactions during cooking and storage, and the evaluation of finished products.

FST 102 Food Service Equipment Operations **3 Credits**

Prerequisites: None. An in-depth study of food service equipment including cleaning, preventive maintenance, specifications and legal requirements with an emphasis on usage.

FST 103 Food Service Sanitation and Safety **3 Credits**

Prerequisites: None. Studies sanitation procedures for the prevention of food-borne illnesses and food contamination in food service facilities. Stresses accident prevention through proper safety methods.

FST 104 Food Production, Methods, and Procedures **3 Credits**

Prerequisites: FST 103 - Food Service Sanitation and Safety, FST 102 - Food Service Equipment and Operations, and FST 101 - Introduction to Food Preparation. Provides study of and application of food production methods and procedures with an emphasis on soups, sauces, and gravies.

FST 105 Quality Service Standards **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid. Provides students with techniques of serving, bussing, and cashiering in dining operations.

FST 106 Application of Food Service Production I **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, FST 102 - Food Service Equipment Operations, and FST 104 - Food Production, Methods, and Procedures. Provides the knowledge and applications of the principles of pantry production, baking, vegetable and fruit preparation, pastries, and breakfast cookery.

FST 108 Application of Food Service Production II **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, FST 101 - Introduction to Food Preparation, FST 102 - Food Service Equipment Operations, and FST 106 - Application of Food Service Production I. Provides knowledge and application of production methods and procedures for meat, seafood, poultry, dairy products, and hot hors d'oeuvres.

FST 109 Computer Food Service Spreadsheets **3 Credits**

Prerequisites: None. Introduces microcomputers and specific food service applications. Covers basic procedures for food service spreadsheet applications involving analysis and reporting using Lotus 1-2-3 or compatible software.

FST 110 Professional Dining Room Service **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid and FST 105 - Quality Service Standards. Provides students with skills in French and Russian service techniques. Included are tableside cooking and wine and beverage service.

GRA 102 Introduction to Machine Printing **3 Credits**

Prerequisites: None. Provides a history and overview of the interrelationships of processes, materials and techniques utilizing equipment and tools necessary in platemaking, bindery/finishing, and offset press. Allows students to take assigned projects from design to bindery.

GRA 104 Art and Copy Preparation **3 Credits**

Prerequisites: None. Provides a foundation in design, typographic, and communication concepts. Presents traditional techniques, as well as computer-aided technologies in the consideration of color, format, and use of visuals in illustration. Emphasizes problem solving with assignments executed through strip-up of the negative into a flat and proofing.

GRA 106 Introduction to Color Printing **3 Credits**

Prerequisites: None. Studies basic color theory, materials, and methods used in reproduction processes. Covers techniques and materials with assignments utilizing different processes, including 4-color from pre-separated negatives, register, and run. Includes inks and systems.

GRA 107 Composition Systems I **3 Credits**

Prerequisites: None. Covers use, operation, and application of machine principles and mechanisms related to typesetting, laboratory projects in setting composition photographically, and utilization and examination of various input systems.

GRA 110 Advertising Design **3 Credits**

Prerequisites: None. Covers newspaper and magazine ads, two- and four-color folders, brochures, calendars, and point of purchase merchandising aids in a comprehensive form for national advertising.

GRA 201 Photomechanical Reproduction **3 Credits**

Prerequisites: None. Introduces image conversion in black and white and color theory. Examines photo chemistry, halftones, darkroom techniques, and diffusion transfer.

GRA 202 Science of Color **3 Credits**

Prerequisites: None. Presents physical properties of light and color and psychological aspects of color perception and relationships through creative exercises. Examines color theories of Itten, Munsell, Goethe, Chevreul, and Albers.

GRA 203 Graphic Design **3 Credits**

Prerequisites: None. Analyzes and reviews basic theories of graphic layout and design and their underlying principles and processes. Includes alphabet design and design language, imposition, design steps, rough, thumbnail, comprehensive, and final layout and preparation of dummy.

GRA 204 Designing with Type **3 Credits**

Prerequisites: None. Introduces typography, type classification, identification, and selection. Includes copy fitting, mark-up systems, proofreading, and fundamentals of layout and design for print media.

GRA 205 Survey of Printing Processes **3 Credits**

Prerequisites: None. Presents topics not normally covered in other courses. Examines those types of printing businesses in local area, utilizing guest lecturers from these businesses. Local market is surveyed and students are responsible for a research project concerning local business with presentation of oral or written report.

GRA 207 Audiovisual Presentation **3 Credits**

Prerequisites: None. Teaches the use of design principles in 35mm color transparencies and fundamentals of studio production and editing. Requires each student to present a slide/tape production that conveys a concept through the effective combination of images, music, and/or narration.

GRA 211 Flexography **3 Credits**

Prerequisites: None. Includes study of high-speed roll-fed press operation. Emphasizes safety, set-up, and register. Includes field trips to flexo-webb printing plants.

GRA 213 Desktop Publishing **3 Credits**

Prerequisites: None. Covers computer techniques in pre-preparatory and preparatory composing procedures, including typesetting and typographic concepts. Emphasizes computer skills and output.

GRA 214 Screen Printing **3 Credits**

Prerequisites: None. Explores screen construction and process reproduction methods. Includes paper, tusche, knife-cut and photographic stencils and printing media surfaces applications.

GRA 215 Computer Graphics II **3 Credits**

Prerequisites: None. Provides an overview of computers and their creative potential in graphic design focusing on videotext graphics. Allows students to create and manipulate images using a keyboard and a graphics tablet.

GRA 218 Troubleshooting and Maintenance **3 Credits**

Prerequisites: None. Includes upkeep, lubrication, and techniques of spotting malfunctioning equipment and corrections of problems concerning paper feed, dampening, and inking systems.

GRA 219 Special Problems in Printing **3 Credits**

Prerequisites: None. Uses individual investigation, research, studies, and/or surveys of selected problems to enable students to identify objectives, procedures, equipment, and key checkpoints on selected projects. Includes color separation, plant management, and quality control.

GRA 224 Photojournalism **3 Credits**

Prerequisites: None. Requires students to photograph community events and human interest features to gain experience in free-lance contributions to local publications. Provides skills in fact gathering, editorial writing, story development, and establishment of visual relationships in the photoessay. Focuses on contemporary photojournalism.

GRA 227 Sensitometry Fundamentals **3 Credits**

Prerequisites: None. Covers the fundamental operation, principles, and equipment associated with reflection and transmission densitometer basics. Requires students to produce large format negatives in black and white and in color for the purpose of controlling densities through exposure and development.

GRA 234 Special Problems in Advertising **3 Credits**

Prerequisites: None. Covers advertising in the economy, broadcast regulations, advertising media, audience measurement, and the future of cable and pay television.

HEA 101 Heating Fundamentals **3 Credits**

Prerequisites: None. Introduces fundamentals applicable to the heating phase of air conditioning. Includes types of units, parts, basic controls, functions, and applications. Emphasizes practices, tools and meter uses, temperature measurement, heat flow, and tubing installation and connecting practices.

HEA 103 Refrigeration I **3 Credits**

Prerequisites: None. Introduces compression systems used in mechanical refrigeration, including the refrigeration cycle. Introduces safety procedures and proper uses of tools used to install and service refrigeration equipment.

HEA 104 Heating Service **3 Credits**

Prerequisites: HEA 101 - Heating Fundamentals and TEC 113 - Basic Electricity. Covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems, including gas, oil, electric, and hydronic heating equipment. Considers electrical schematic and diagrams, combustion testing, venting and combustion air requirements, installation, and service procedures.

HEA 106 Refrigeration II **3 Credits**

Prerequisites: HEA 103 - Refrigeration I and TEC 113 - Basic Electricity. Continues Refrigeration I with further study of compressors, metering devices and an introduction to troubleshooting procedures. Includes clean-up procedures following compressor burn-out and analysis of how a single problem affects the rest of the system.

HEA 107 Duct Fabrication and Installation **3 Credits**

Prerequisites: Advisor approval. Emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail, and mechanical plans. Requires students to develop a layout of an air conditioning system, layout of duct work and fittings and fabrication of these parts, including proper use of hand-tools, and shop equipment used to fabricate duct work and fittings.

HEA 201 Cooling Service **3 Credits**

Prerequisites: TEC 113 - Basic Electricity and HEA 103 - Refrigeration I. Covers procedures used to diagnose electrical control problems found in residential air conditioning and refrigeration systems, including 24-volt and line voltage controls such as defrost timers, defrost heaters, relays, and cold controls with emphasis on schematic and pictorial diagrams.

HEA 202 Electrical Circuits and Controls **3 Credits**

Prerequisites: HEA 101 - Heating Fundamentals, HEA 103 - Refrigeration I, and TEC 113 - Basic Electricity. Studies various kinds of heating, air conditioning, and refrigeration controls. Includes gas, oil, cooling and electric heat controls, thermostats and other kinds of variable controls such as humidistats, aquastats, and electronic thermostats and temperature controls. Covers operation of controls and how they are integrated into complex systems by using schematic and pictorial diagrams. Presents component troubleshooting and testing.

HEA 203 Heat Loss and Gain Calculation **3 Credits**

Prerequisites: Advisor approval. Covers methods used in calculating building envelope heat loss and heat gain in sizing units for residential and light commercial applications. Discusses building construction techniques and energy consumption reduction methods.

HEA 204 Commercial Refrigeration **3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls, HEA 106 - Refrigeration II, and HEA 202 - Electrical Circuits and Controls. Examines air conditioning and refrigeration systems for commercial use, including medium- and low-temperature applications. Includes refrigeration accessories, metering devices, and advance control arrangements.

HEA 205 Heat Pump Systems **3 Credits**

Prerequisites: Advisor approval. Provides an understanding of the different types of heat pumps available for use today. Familiarizes students with the refrigeration cycle as it applies to the heat pump systems. Provides students with the opportunity to draw, trace, and follow an electrical schematic of a heat pump with refrigerant. Includes selecting the proper heat pump, recording heat loss, and gain calculations for the space available. Provides instruction in mechanical components and in troubleshooting a non-functioning heat pump.

HEA 206 Advanced Cooling Service **3 Credits**

Prerequisites: HEA 201 - Cooling Service. Considers methods of troubleshooting electrical and mechanical components of air conditioning and refrigeration systems.

HEA 207 HVAC Codes **3 Credits**

Prerequisites: None. Study of state and local codes covering installation, repair, alteration, relocation, replacement and erection of heating, ventilation, cooling, and refrigeration systems. Includes job-related costs of material and equipment, labor, warranty, taxes, permits, and sub-contracts. Students will estimate service and maintenance contracts.

HEA 208 Energy Management and Balancing **3 Credits**

Prerequisites: Advisor approval. Deals with reduction in energy usage in a facility, operational and maintenance improvements, new building design standards, shut-down and consolidation, alternate energy resources, retrofitting existing buildings, and energy awareness. Includes practice in adjusting and setting fan speeds, dampers, and other air regulating devices.

HEA 209 Psychrometrics/Air Distribution **3 Credits**

Prerequisites: Advisor approval. Studies the properties of air during the operational variations of temperature and humidity. Discusses the atmospheric conditions and the impact of those conditions on the heating-cooling processes and the design of systems for residential and commercial structures. Includes the sizing and configurations of air delivery duct systems and system design methods.

HEA 210 Alternative Energy Systems **3 Credits**

Prerequisites: Advisor approval. Studies the magnitude of the energy available, the various methods used in collecting this energy, how to use it, and how to store it for heating and cooling work. Selects components of the systems, including collector cells sizing, pump sizing, pipe, and duct sizing and designing distribution systems. Reviews controls for systems. Studies operating costs and savings.

HEA 211 Absorption Systems **3 Credits**

Prerequisites: HEA 206 - Advanced Cooling Service or equivalent in mechanical training and HEA 212 - Advanced HVAC Controls or equivalent in electrical training. Surveys special cooling systems with emphasis on the absorption cycle. Includes ammonia-water and lithium-bromide cycles, types of units, arrangements, parts, function of various parts, and applications of units into air conditioning systems in addition to diagnosis of service problems.

HEA 212 Advanced HVAC Controls **3 Credits**

Prerequisites: HEA 202 - Electrical Circuits and Controls. Covers control systems beyond ordinary residential and single zone commercial applications. Includes solid state controls, zoning controls, modulating controls, low ambient controls, heat recovery and energy management controls, economizer controls, and pneumatic controls.

HEA 213 Sales and Service Management **3 Credits**

Prerequisites: Advisor approval. Encompasses the use of blueprints, specifications, AIA documents, application data sheets, bid forms and contracts in estimating materials and labor in the HVAC business. Includes advertising, direct labor, indirect labor, overhead, warranty overages, taxes, permits, subcontracts, margins, mark-ups, and profit. Provides students with the opportunity to estimate service contracts and study service organization, service procedures, record keeping, parts inventory control, and insurance liability.

HEA 214 Applied Design **3 Credits**

Prerequisites: Advisor approval. Provides students with the opportunity to design and lay out a complete HVAC system.

HEA 215 Advanced Cooling Design **3 Credits**

Prerequisites: HEA 203 - Heat Loss and Gain Calculation. Applies fundamental principles of HVAC design, including psychrometrics, heat transfer, heating and cooling loads, and refrigeration principles. Other topics are equipment selection, distribution systems, energy management, and contro systems. A semester project is required.

HEA 220 Distribution Systems **3 Credits**

Prerequisites: Advisor approval. Covers methods used in calculating building envelope heat loss and gain in sizing units for residential and ligh commercial applications. Studies the relationship of air properties to temperature and the design of systems for residential and light commercia structures. Includes the sizing and configurations of air delivery duct systems.

HEA 221 Heat Pumps and Cooling Service **3 Credits**

Prerequisites: HEA 103 - Refrigeration I, HEA 106 - Refrigeration II, and TEC 113 - Basic Electricity. Covers procedures used to diagnose electrica control problems found in residential air-to-air, geothermal heat pump and cooling systems, including 24-volt and line voltage controls. Familiarize students with the refrigeration cycle as it applies to the heat pump. Covers correct charging procedures and sizing of heat pumps. Includes troubl shooting of heat pumps and cooling systems such as defrost timers, defrost heaters, relays, and cold controls with emphasis on schematic and pictoria diagrams.

HHS 101 Medical Terminology **3 Credits**

Prerequisites: None. Addresses basic terminology required of the allied health professional. Presents Greek and Latin prefixes, as well as suffixes, wor roots, and combining forms. Emphasizes forming a solid foundation for a medical vocabulary including meaning, spelling, and pronunciation. Include medical abbreviations, signs, and symbols.

HHS 102 Medical Law and Ethics **2 Credits**

Prerequisites: Demonstrated competency in reading through appropriate assessment or successful completion of BSA reading coursework. Present ethics of medicine and medical practice, as well as legal requirements and implications for allied health professions.

HHS 103 Dosage Calculation **1 Credit**

Prerequisites: Demonstrated competencies in mathematics and reading or ENG 031 - Reading Strategies for College I and MAT 044 - Mathematic Introduces the mathematical concepts required of the allied health professional to accurately administer medications.

HHS 104 CPR and Basic Health Awareness **1 Credit**

Prerequisites: None. Provides students with information necessary to recognize the need for one- and two-person cardiopulmonary resuscitation (CPR as it relates to adults, children, and infants. Requires students to safely perform CPR.

HHS 106 Holistic Concepts and Skills **3 Credits**

Prerequisites: Demonstrated competency in ENG 024 - Introduction to College Writing I, and ENG 031 - Reading Strategies for College I or throug appropriate assessment. Introduces the student to the holistic approach in the art and science of healthful living. The course content emphasizes th interrelatedness of the total person—body, mind, and spirit—in achieving the goals of therapeutic, rehabilitative, and maintenance roles. The studer will identify and model methods of personal holistic wellness in society.

HLT 125 Health Care Systems and Trends **3 Credits**

Prerequisites: None. Studies the health care industry emphasizing the systems approach to health care and the current trends facing the industry. Give special attention to managed care organizations.

HLT 225 Finance and Budgeting for Health Care **3 Credits**

Prerequisites: ACC 101 - Accounting Principles I. Importance is placed on the development and use of departmental budgets. Financial statements wi be used to project future expenses and revenues for an organization and/or department. Emphasizes the reimbursement process for a managed car environment and purchasing procedures.

HLT 226 Organizational Development in Health Care **3 Credits**

Prerequisites: BUS 105 - Principles of Management. Examines organizational structure in health care organizations, including traditional structures and re engineering of the health care industry. Covers staff development, training, job analysis and design, and departmental staffing. Discusses medical ethics.

HMS 101 Introduction to Human Services **3 Credits**

Prerequisites: None. Explores the history of human services, career opportunities, and the role of the human service worker. Focuses on targe populations and community agencies designed to meet the needs of various populations.

HMS 102 Helping Relationships Techniques **3 Credits**

Prerequisites: None. Examines the helping process in terms of skills, helping stages, and issues involved in a helping relationship. Introduces major theories of helping.

HMS 103 Interviewing and Assessment **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, or permission of the program chair. Develops skills in interviewing and provides a base for students to build personal styles. Introduces a variety of assessment approaches and treatment planning. Utilizes case studies and recording exercises.

HMS 104 Crisis Intervention **3 Credits**

Prerequisites: None. Provides beginning training for individuals presently working with people in crisis situations or planning to do so.

HMS 105 Introduction to Correctional Rehabilitation Services **3 Credits**

Prerequisites: None. Introduces the study of crime and criminals and how society is affected.

HMS 106 Physiology of Aging **3 Credits**

Prerequisites: None. Focuses on the physical changes and common pathologies associated with the aging process. Includes the psychological and social implications of changes for human behavior. Focuses on health promotion and disease prevention.

HMS 107 Human Services Topical Seminar **3 Credits**

Prerequisites: Approval of program chair. Discusses topics of current interest in human services. Focuses on special interest projects for students in human services. Utilizes field trips, guest speakers, audio-visual activities, and seminars.

HMS 108 Psychology of Aging **3 Credits**

Prerequisites: None. Covers the major behavioral changes in adulthood and aging.

HMS 109 Families in American Culture **3 Credits**

Prerequisites: None. Covers the impact of change on the role and function of the modern family, the nature of the socialization process and socio-economic, cultural and ethnic factors that nurture, or inhibit the family's capacity to function.

HMS 112 Recreation for Special Populations **3 Credits**

Prerequisites: None. Studies the nature and etiology of impairments including developmental disabilities, mental illness, physical disabilities and geriatrics, and their potential impact upon an individual's ability to participate in recreational activities. Explores techniques needed to conduct a recreation program which allows successful participation by an individual with a disability.

HMS 113 Problems of Substance Abuse in Society **3 Credits**

Prerequisites: None. Provides basic information about alcohol and drugs and the laws which pertain to their abuse. Explores current attitudes and practices which pertain to alcohol and drug use, misuse, and dependence.

HMS 114 Social Services in Long-Term Care **3 Credits**

Prerequisites: None. Provides practical and useful information about aging and institutionalization. Focuses on the role of social services within the long-term care facility.

HMS 115 Applied Behavioral Psychology **3 Credits**

Prerequisites: None. Studies the unique capacities and personal strengths of self and others. Emphasizes discovering, clarifying, and affirming individual potential for living more fully. Discusses the complex nature of human development, human behavior, and related social problems.

HMS 118 Introduction to Long-Term Care **3 Credits**

Prerequisites: None. Explores the history of health care provided outside the home and offers an overview of long-term health care facilities. Includes rules and regulations of nursing homes, resident rights, legislation, and physical plant requirements.

HMS 119 Interdisciplinary Team Management **3 Credits**

Prerequisites: None. Explores principles and relationships of the interdisciplinary team, the various departments which may compose the team, and the services each department provides.

HMS 120 Health and Aging **3 Credits**

Prerequisites: None. Provides holistic overview of the physical, psychological, and social needs of individuals who live in extended care facilities. Examines effective treatment modalities to meet the resident's various needs.

HMS 121 Issues of Long-Term Care **3 Credits**

Prerequisites: None. An overview of various issues to familiarize students with responsibilities of nursing home administrators. Management styles models, quality circles, and personal improvements are covered.

HMS 122 Introduction to Residential Treatment **3 Credits**

Prerequisites: None. Introduces information, skills, and attitudes necessary to become an effective worker in residential treatment. Explores basi developmental needs, planning and use of activities, and issues related to the team approach. Discusses and Demonstrate observation and recording c behavior.

HMS 124 Activity Director Basic **6 Credits**

Prerequisites: None. Explores the philosophy and investigates the development of therapeutic activity programs for older persons. Focuses on activities which will meet the individual's physical, social, and emotional needs.

HMS 125 Activity Director Internship I **2 Credits**

Prerequisites: HMS 124 - Activity Director Basic. Correlates with HMS 124 - Activity Director Basic and provides field work experience in all depart ments of a health care facility.

HMS 130 Social Aspects of Aging **3 Credits**

Prerequisites: None. Covers major theories and patterns of aging in American society. Covers social institutions and cultural factors that affect the aging process.

HMS 140 Loss and Grief **3 Credits**

Prerequisites: None. Provides practical and useful information for anyone who has experienced a loss. Addresses the problems of loss and grief and how to develop coping skills.

HMS 150 Special Population Needs and Activities **3 Credits**

Prerequisites: None. Recognizes and utilizes social activities and recreation as a viable form of therapeutic intervention based on the client's limitations or special needs.

HMS 160 Human Growth and Development **3 Credits**

Prerequisites: None. Introduces cognitive, social psychology theories of human development from the prenatal period through the adolescent years.

HMS 201 Internship I **4 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, and HMS 103 - Interviewing and Assessment, or permission by program chairperson. Provides field work experience in an approved social, educational, law enforcement, corrections, or other community service organization. Requires 14 to 16 hours of work experience each week.

HMS 202 Internship II **4 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Continues Internship I. Requires 14 to 16 hours of work experience each week.

HMS 203 Internship Seminar I **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Permits small group discussion and analysis of the human services practicum experience. Includes special learning objectives related to the kind of work students do after completing the program.

HMS 204 Internship Seminar II **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Continues Internship Seminar I with different learning objectives. Relates objectives to the work the student will do after completion of the program.

HMS 205 Behavioral/Reality Techniques **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Focuses on theories of behavioral and reality approaches. Develops understanding of terms and practical applications of the behavioral and reality approaches used in working with people.

HMS 206 Group Process and Skills **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing and Assessment, or permission by program chairperson. Studies group dynamics, issues, and behavior. Includes group functioning and leadership, guidelines on working effectively with a co-leader, and practical ways of evaluating the group process.

HMS 207 Program Planning/Policy Issues **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Deals with the components of administration of human service agencies. Addresses practitioner skills needed by administrators or supervisors. Discusses social policy issues and impact on human services.

HMS 208 Treatment Models of Substance Abuse **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Describes the various treatment models used with chemically dependent clients. Discusses intervention and treatment models for chemical dependency and their role in the recovery process.

HMS 209 Counseling Issues **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Explores practice strategies for counselors of chemically dependent clients.

HMS 210 Co-Dependency **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Presents definitions of co-dependency and issues related to it. Teaches skills and techniques to confront co-dependent behavior.

HMS 215 Juvenile Delinquency **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Provides an overview of the concepts, definitions, and measurements of juvenile delinquency. Explores various theories on the causes of delinquency. Looks at the role of environmental influences (peers, gangs, school, drugs, etc.) contributing to delinquency. Discusses the history and philosophy of the juvenile justice system as well as ways to control and treat juvenile delinquents.

HMS 220 Legal Aspects **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, or permission by program chairperson. Provides an overview of the legal and ethical aspects in the field of human services with implications for the human services worker. Includes liability, confidentiality and privilege, records and rights of clients, due process, and equal protection in terms of staff and client, discrimination, and witnessing.

HMS 224 Activity Director Advanced Management **6 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, HMS 124 - Activity Director Basic, or permission by program chairperson. Provides skills needed for the management and supervision of an activity department in a health care facility.

HMS 225 Activity Director Internship II **2 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, HMS 103 - Interviewing/Assessment, HMS 125 - Activity Director Internship I, or permission by program chairperson. Correlates with Activity Director Advanced Management and provides fieldwork experience in all departments of a health care facility.

HMS 240 Rehabilitation Process: Probation and Parole **3 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationships Techniques, and HMS 103 - Interviewing/Assessment. Provides an understanding of probation and parole as an integral part of the criminal justice system with special emphasis on current and future trends in this area. Explores the role of community corrections and its impact on the role of probation and parole in our society in view of the increase in the number of offenders.

HMS 280 Co-op/Internship **1-6 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, and HMS 103 - Interviewing/Assessment. The student will work at a job site that is specifically related to his/her career objectives. This course is designed to provide on-the-job experience while earning credit toward an associate degree.

HMS 281-293 Special Topics in Human Services **1-5 Credits**

Prerequisites: HMS 101 - Introduction to Human Services, HMS 102 - Helping Relationship Techniques, and HMS 103 - Interviewing/Assessment. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

HMT 100 Occupational Safety and Health Administration (OSHA) Regulations **3 Credits**

Prerequisites: None. Provides a study of the U.S. Occupational Safety and Health Administration's (OSHA) regulations which protect workers from exposure to occupational hazards. Concentrates on researching, interpreting, summarizing, and applying the OSHA regulations for workers who handle hazardous materials.

HMT 104 Environmental Toxicology **3 Credits**

Prerequisites: None. Reviews research conducted to determine the systematic health effects of exposures to chemicals. Includes determination of risk factors, routes of entry of hazardous materials, and their effects on target organs, acute, and chronic effects and control measures.

HMT 120 Hazard Communication Standard **3 Credits**

Prerequisites: None. Provides instruction concerning the development and implementation of a hazard communication program for employees. Provides experience in conducting a chemical inventory, interpreting material safety data sheets (MSDSs), developing a written hazard communication program that complies with 29CFR 1910.1200, and conducting an effective hazard communication training program.

HMT 200 Environmental Protection Agency (EPA) Regulations **3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration (OSHA) Regulations. Provides a detailed study of the U.S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA).

HMT 201 Contingency Planning **3 Credits**

Prerequisites: None. Teaches students to develop an emergency response contingency plan for a facility or community. Includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency, and evaluating the effectiveness of the contingency plan.

HMT 203 Sampling Procedures **3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration, HMT 120 - Hazard Communication Standard, and HMT 200 - Environmental Protection Agency Regulations. Introduces students to a variety of sampling procedures used in industrial settings and for emergency response. Includes sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil sampling and radiation. Emphasizes collecting and preserving representative samples, interpreting laboratory results and complying with relevant federal regulations.

HMT 205 Department of Transportation (DOT) Regulations **3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration. Provides a detailed study of the U.S. Department of Transportation (DOT) regulations. Introduces certain Nuclear Regulatory Commission and Environmental Protection Agency regulations pertinent to hazardous materials transportation. Includes problems and case studies in which students identify and interpret applicable DOT regulations and recommend compliance strategies. Provides practical understanding of DOT issues through interviews with local professionals in hazardous materials handling.

HMT 220 Hazardous Materials Recovery, Incineration and Disposal **3 Credits**

Prerequisites: CHM 101 - Chemistry I. Explains methods of recovery, incineration and/or disposal of hazardous waste. Includes contracting with qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste.

HMT 240 Incident Management **3 Credits**

Prerequisites: HMT 100 - Occupational Safety and Health Administration or advisor approval. Covers the emergency response components of HAZWOPER (Hazardous Waste Operations and Emergency Response), specifically 29 CFR 1910.120 (q). Through case studies, students will analyze and apply the theory of the Incident Command System (ICS) from discovery of a hazardous substance release to decontamination and appreciate the roles of all HAZMAT team members from First Responder Awareness Level to the On-Scene Incident Commander.

HOS 101 Sanitation and First Aid **3 Credits**

Prerequisites: None. Helps students learn basic principles of sanitation and safety in order to maintain a safe and healthy food service environment. Presents the laws and regulations related to safety, fire, and sanitation and how to adhere to them in the food service operation.

HOS 102 Basic Foods Theory and Skills **3 Credits**

Prerequisites: None. Students learn the fundamentals of food preparation, service procedures, and sanitation and safety practices in the food service business. They will use proper operation techniques for equipment. This course also provides a background and history of the hospitality industry and introduces the student to the broad spectrum of hospitality/food service organizations and career opportunities. Students will be familiarized with the organizational structure and basic functions of departments.

HOS 103 Soups, Stocks and Sauces **3 Credits**

Prerequisites: None. Concentrates on the four major stocks and the soups that are derived from them. Time will be given to help develop the necessary skills to prepare food using any one of the 14 major cooking methods.

HOS 104 Nutrition **3 Credits**

Prerequisites: None. Introduces the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

HOS 105 Introduction to Baking **3 Credits**

Prerequisites: None. Presents fundamentals of baking science, terminology, ingredients, weights and measures, yeast goods, pies, cakes, cookies and quick breads, and use and care of equipment. Emphasizes sanitation, hygienic work habits, and conformity with health regulations.

HOS 106 Pantry and Breakfast **3 Credits**

Prerequisites: HOS 103 - Soups, Stocks, and Sauces. Covers the techniques and skills needed in breakfast cookery, as well as insight into the pantry department. Various methods of preparation of eggs, pancakes, waffles, and cereals will be discussed. Students will receive instruction in salad preparation, salad dressings, hot and cold sandwich preparation, garnishes, and appetizers.

HOS 107 Hospitality Computer Systems **3 Credits**

Prerequisites: None. Provides an overview of the information needs of lodging properties and food service establishments and addresses essential aspects of computer systems and computer based property management systems for both front office and back functions. Focuses on computer-based restaurant management systems for both service-oriented and management-oriented functions.

HOS 108 Table Service **3 Credits**

Prerequisites: None. Provides students with practical knowledge and skills of various types of service operations. The student will gain knowledge and an appreciation of the relationship between "front" and "back" of the house. Emphasis is also placed on management skills needed for bar and dining room management.

HOS 109 Hospitality Purchasing **2 Credits**

Prerequisites: None. Studies in detail major groups of food purchased by quantity buyers including fresh fruits and vegetables, dairy products, meats and seafood, processed products, beverages and non-food items. Outlines the essentials of effective food and beverage control while establishing systems for sale values for food and beverages.

HOS 114 Hospitality Organization and Administration **3 Credits**

Prerequisites: None. Analyzes management's functions and responsibilities as they pertain to the hospitality industry. Appropriate styles of hospitality leadership are covered.

HOS 115 Diet Therapy **4 Credits**

Prerequisites: None. Presents to food services employees or prospective employees of health care institutions knowledge about basic nutrition, therapeutic diets, and menu planning; students use knowledge by writing menus. Practicum required as an integral part of the course.

HOS 116 Dietary Management I **4 Credits**

Prerequisites: None. Includes specifications, storage, purchasing and storage, feeding in emergencies, sanitation, and safety in a format designed for food service required as an integral part of the course.

HOS 117 Dietary Management II **4 Credits**

Prerequisites: None. Includes specifications, storage, purchasing and preparation of food, recipe standardization, kitchen designs and delivery systems in format designed for food service employees or employees of health care institutions. Practicum required as an integral part of the course.

HOS 118 Resident Clinical Assessment Practicum **4 Credits**

Prerequisites: None. Introduces the student to the residential care environment and provides the opportunity for the student to learn how to complete residential nutritional status assessments, evaluate resident nutritional needs, complete the required resident evaluation instruments and to write appropriate nutrition care.

HOS 128 Total Quality Management (TQM) In Restaurant Operations **3 Credits**

Prerequisites: None. Provides students with practical knowledge and skills of restaurant operations through TQM. Emphasis is placed on forming an organizational team from traditional "front and back-of-the house" roles. In addition, various types of service for food and beverages are taught to demonstrate the versatility of the industry.

HOS 131 Techniques of Casino Games: Craps **9 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Craps: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Craps.

HOS 132 Techniques of Casino Games: Blackjack **6 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Blackjack: chip handling and cutting, shuffling, card delivery, call bets, procedures, accuracy, and game speed. Special attention is paid to the managerial aspects of Blackjack.

HOS 133 Techniques of Casino Games: Roulette **3 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Roulette: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Roulette.

HOS 134 Techniques of Casino Games: Baccarat **3 Credits**

Prerequisites: None. Emphasizes fundamentals of dealing the game of Baccarat: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Baccarat.

HOS 141 Introduction to Casino Operations **3 Credits**

Prerequisites: None. Concentrates on the basic rules, fundamentals, and procedures of all the revenue producing areas of a modern casino. Covers table games, slots, race and sports betting, bingo, and keno. Includes an overview of other pertinent casino areas such as casino cage and surveillance. Introduces casino math, game operations, and protection.

HOS 201 Hospitality Organization and Human Resources Management **3 Credits**

Prerequisites: None. Teaches the necessary skills for proper recruiting, staffing, training and managing employees at various levels in hospitality careers. Emphasizes the organization's evolutionary and problem solving process.

HOS 202 Garde Manger **3 Credits**

Prerequisites: HOS 106 - Pantry and Breakfast. Illustrates basic garde manger principles and the functions and duties of the garde manger department as they relate and integrate with other kitchen operations. Students will focus on introduction to specialty work which includes ice carving, artistic center pieces, and buffet decorations. They will demonstrate equipment and garde manger area planning.

HOS 203 Menu, Design, and Layout **2 Credits**

Prerequisites: None. Provides the skills needed to apply the principles of menu planning to various types of facilities and services. This course covers menu layout, selection, and development and pricing structures.

HOS 204 Food and Beverage Cost Control **2 Credits**

Prerequisites: None. Introduces mathematical principles applied to the food service industry and uses skills to complete food related tasks.

HOS 205 Food and Beverage Cost Control Applications **1 Credit**

Prerequisites: None. Covers the principles and procedures involved in an effective system of room, food, beverage, labor, and sales income. Emphasizes the development and use of standards in the calculation of cost.

HOS 206 Fundamentals of the Catering Business **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid and FST 102 - Food Service Equipment Operations. Introduces the fundamentals of owning and operating a small catering business including personal, legal, and operational requirements.

HOS 207 Advanced Baking and Chocolates **3 Credits**

Prerequisites: None. Covers classical French and European desserts. Includes the preparation of goods such as Napoleons, Gateaux St. Honore, petits fours and petits fours sec, ganaches, pastry creams and fillings, sauces, flans and tarts and European sponges. Includes tempering of chocolates, molding and chocolate plastique, preparation of truffles, pastilage and marzipan, short doughs, and meringues. Requires students to submit three pieces from the American Culinary Federation approved individual pastry display category to be judged as a final practical exam.

HOS 214 Hospitality Law and Security **3 Credits**

Prerequisites: None. Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotel keeper. Illustrates the possible consequences of failure to satisfy legal obligations.

HOS 216 Hospitality Marketing and Group Sales **3 Credits**

Prerequisites: None. Presents a practical understanding of the operating statement and precisely where, how, and why the sales effort fits into total earnings and profit. Teaches how to measure and gauge accurately the precise worth of every type of business in advance.

HOS 221 Catering Administration **3 Credits**

Prerequisites: HOS 101 - Sanitation and First Aid, CUL 110 - Meat Cutting, HOS 204 - Food and Beverage Cost Control, and CUL 202 - Specialized Cuisine. Provides instruction in the fundamentals of catering, including the business of supplying food, goods and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service and menu planning. Demonstrate techniques of setting up banquets and buffets. Requires students to plan, budget, cost, test recipes and formats, plan decor, service and entertainment for catered events.

HOS 231 Techniques of Casino Games: Craps-Subsequent **7 Credits**

Prerequisites: HOS 131 - Techniques of Casino Games: Craps or HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Craps: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Craps.

HOS 232 Techniques of Casino Games: Blackjack-Subsequent **5 Credits**

Prerequisites: HOS 132 - Techniques of Casino Games: Blackjack or HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Blackjack: chip handling and cutting, shuffling, card delivery, call bets, procedures, accuracy, and game speed. Special attention is paid to the managerial aspects of Blackjack.

HOS 233 Techniques of Casino Games: Roulette-Subsequent **6 Credits**

Prerequisites: HOS 133 - Techniques of Casino Games: Roulette. Emphasizes fundamentals of dealing the game of Roulette: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Roulette.

HOS 234 Techniques of Casino Games: Baccarat Subsequent **3 Credits**

Prerequisites: HOS 134 - Techniques of Casino Games: Baccarat. Emphasizes fundamentals of dealing the game of Baccarat: chip handling and cutting, call bets, procedures, accuracy, and game speed. Requires the development of quick mental multiplication and game speed, and knowledge of all bets and procedures for payoffs. Special attention is paid to the managerial aspects of Baccarat.

HOS 242 Casino Supervision **3 Credits**

Prerequisites: None. Provides an in-depth study of casino management techniques used in gaming both locally and nationwide. Emphasizes the duties and responsibilities of the mid-level casino supervisor and the casino executive. Includes duties of floor, pit, and shift managers. Stresses game protection, credit and marker control, cash and check control, and internal regulatory procedures.

HOS 243 Casino Cage Operations **3 Credits**

Prerequisites: None. Focuses on the casino cashier cage, its operation, and its interface operations with the various resort departments. Emphasizes basic cage procedures, federal monetary regulations, and controls and procedures which are standardized, regardless of the casino operation.

HOS 244 Slots Management **3 Credits**

Prerequisites: None. Emphasizes basic slots managerial techniques including supervision of slot shift managers, mechanics, technicians, floor personnel, change persons, booth cashiers, carousel attendants, coin room operators, jackpot fills, and credits.

HOS 245 Casino Surveillance **3 Credits**

Prerequisites: None. Studies all aspects of modern casino surveillance, including all table games, slots, cage, keno, and all areas of the casino. Increases the students' familiarity with regulations, criminal laws, rules of evidence, and game protection, fostering both knowledge and professionalism within the work place.

HOS 280 Co-op/Internship/Externship/Practicum **3 Credits**

Prerequisites: None. Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

HOS 281-293 Special Topics in Hospitality Administration **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

HRM 202 Front Office **3 Credits**

Prerequisites: None. Presents a systematic approach to front office procedures, detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures within the context of the overall operation of a hotel. Examines front office management, the process of handling complaints, and concerns regarding hotel safety and security.

HRM 206 Supervisory Housekeeping **3 Credits**

Prerequisites: None. Introduces the fundamentals of housekeeping management. Emphasis is placed on employee training, record-keeping, health and safety cost control, and overall responsibilities.

IDS 102 Introduction to Print Reading **3 Credits**

Prerequisites: None. Provides an introduction to reading and interpreting machine shop symbols, welding blueprints, and working drawings used in trades and crafts. Focuses on dimension, shape, fabrication, and assembly. Applies basic mathematics to the solution of print and performance problems.

IDS 103 Motors and Motor Controls **3 Credits**

Prerequisites: TEC 113 - Basic Electricity. Provides a complete understanding of all types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. Includes motor theory magnetism and how it affects motor rotation. Provides in-depth study of motor starting components and protective devices for motor circuits. Includes heat dissipation from a motor, motor slippage, how motors are wired to obtain different speeds, and capacitors and how they affect a motor circuit.

IDS 104 Fluid Power Basics **3 Credits**

Prerequisites: MAT 050 - Basic Algebra or advisor approval. Introduces the student to fluid power principles and components. Teaches basic circuit design, symbols, and schematic diagrams to build a foundation for career work in fluid power technology.

IDS 114 Introductory Welding **3 Credits**

Prerequisites: None. Provides basic skills and fundamental knowledge in oxyacetylene and shielded metal welding for maintenance welders, auto service and body technicians, and individuals in the mining industry. Emphasizes industry welding practices and detailed study of techniques used in all weld positions. Covers brazing and flame cutting and electrode selection and uses. Emphasizes safe practices in welding, cutting, and shielded metal arc.

IDS 281-293 Special Topics in Industrial Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ILT 101 Industrial Laboratory Techniques **3 Credits**

Prerequisites: None. Deals with basic skills needed in the industrial laboratory such as safety, identification, care, and operation of basic laboratory equipment including pH meters, spectrophotometers, glassware, and definition and preparation of reagents. Includes laboratory exercises in the use of selected equipment.

ILT 201 Industrial Instrumentation and Techniques I **3 Credits**

Prerequisites: ILT 101 - Industrial Laboratory Techniques and CHM 101 - Chemistry I. Addresses theoretical aspects of industrial laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents theories and laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

ILT 202 Industrial Instrumentation and Techniques II **3 Credits**

Prerequisites: ILT 201 - Industrial Instrumentation and Techniques I. Continues the theoretical study of ILT 201 by addressing industrial applications of laboratory instrumentation, including gas and liquid chromatography (GC and LC), high performance liquid chromatography (HPLC), infra-red (IR) spectrophotometry and atomic absorption (AA). Presents automation techniques, including sampling, data collection, and analysis. Covers the laws that govern the way instruments operate. Includes student experimentation on various analytical instruments.

ILT 203 Environmental Monitoring **3 Credits**

Prerequisites: Advisor approval. Deals with aspects of environmental pollution, providing a realistic and objective view of pollution problems. Includes the role of technology in the identification of environmental pollution.

ILT 205 Introduction to Technology **3 Credits**

Prerequisites: Advisor approval. Reviews disciplines comprising scientific and engineering fields of study. Covers physics, chemistry, biology, environmental science, civil, mechanical, electrical, and industrial engineering. Introduces theory, principles, and practices related to the work of a scientific or engineering assistant/aide. Covers safety, professional ethics, and use of the scientific calculator/computer as a scientific and engineering tool.

ILT 206 Food and Drug Analysis **3 Credits**

Prerequisites: Advisor approval. Examines the food processing industry. Includes various analytical techniques and quality control standards utilized by the food industry. Includes classification of drugs and various methods of purification. Covers instruments and procedures used to monitor the quality and quantity of the composition of a product.

ILT 217 Wastewater Analysis **3 Credits**

Prerequisites: Advisor approval. Deals with the chemical and biological analysis of wastewater. Major pollutants of water are determined and quantified. The wastewater treatment steps are discussed to determine ideal lab sampling locations. Various wastewater tests such as BOD's, COD's, sedimentation rates and biological examinations are performed.

IMT 105 Heating and Air Conditioning Basics **3 Credits**

Prerequisites: None. Presents fundamentals of heating and compression systems used in mechanical refrigeration and air conditioning. Includes combustion process, heat flow, temperature measurement, gas laws, heating and refrigeration cycles, and components used in systems. Introduces basic mechanical service procedures used in industry.

IMT 106 Millwright I **3 Credits**

Prerequisites: Advisor approval. Introduces the proper use of hand and power tools and measuring instruments in carpentry, blacksmithing, rigging and equipment, machinist, and general shop. Includes structural steel and fabricating terms.

IMT 107 Preventive Maintenance **3 Credits**

Prerequisites: Advisor approval. Focuses on detecting and correcting potential trouble spots and scheduling routine inspections with checklists. Studies five essential forms of preventive maintenance: equipment record, checklist, inspection schedule, inspection report, and equipment cost record.

IMT 108 Measurements and Calibration **3 Credits**

Prerequisites: Advisor approval. TEC 113 - Basic Electricity. Provides instruction in the purpose, function, and application of oscilloscopes and related instruments.

IMT 110 Coupling and Alignment **3 Credits**

Prerequisites: None. Introduces the concepts of correct alignment of industrial process machinery. Provides instruction in troubleshooting and repair of coupled machines.

IMT 111 Rigging **3 Credits**

Prerequisites: None. Introduces the proper techniques of moving industrial machinery and equipment. Emphasis is placed on proper installation, inspection, safety requirements, and load calculation.

IMT 112 Sheet Metal Layout and Design **3 Credits**

Prerequisites: None. Examines the procedures used to layout sheet metal components. Presents the proper use of hand and machine tools to fabricate sheet metal projects.

IMT 120 Metallurgy Fundamentals **3 Credits**

Prerequisites: None. Studies the fundamentals of thermodynamics and reactions occurring in metals subjected to various kinds of heat treatment. Includes classification and properties of metals, chemical and physical metallurgy, theory of alloys, heat treatment principles as applied to ferrous and non-ferrous materials, test to determine uses, heat treatment for steels, special steels, and cast iron, powder metallurgy, and use of gas and electric furnaces and their controls.

IMT 122 Electrical Wiring Fundamentals **3 Credits**

Prerequisites: None. Covers National Electrical Code and its relationship to residential and commercial wiring. Includes mechanical installation of hardware, metering equipment, lights, switches, and design. Discusses tool use and materials selection.

IMT 201 Fluid Power Systems **3 Credits**

Prerequisites: IDS 104 - Fluid Power Basics. Introduces the student to more complex fluid power circuits. Requires students to design, analyze, and troubleshoot complex circuits using schematic diagrams. Studies detailed construction of typical industrial fluid power components. Teaches students to disassemble and evaluate fluid power components in the lab.

IMT 203 Machine Maintenance/Installation **3 Credits**

Prerequisites: None. Examines procedures for the removal, repair, and installation of machine components. Analyzes methods of installation, lubrication practices, and maintenance procedures for industrial machinery. Presents techniques for calibration and repair of electro-mechanical devices and practice in computations pertaining to industrial machinery.

IMT 205 Programmable Controllers I **3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls or IMT 207 - Electrical Circuits or advisor approval, TEC 104 - Computer Fundamentals for Technology. Introduces the basic theory, operation, and programming of programmable controllers. Includes pilot control devices, circuit layouts, industrial schematics, relay logic, reduced voltage starters and multi-speed controllers. Covers static control systems. Demonstrate with programming examples, set-up examples and troubleshooting, as well as PLC timing, counting, arithmetic, and logic.

IMT 207 Electrical Circuits **3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls, MAT 121 - Geometry-Trigonometry or advisor approval, TEC 113 - Basic Electricity. Provides fundamentals of single- and three-phase alternating current, including parallel circuits, resistance, inductance, capacitance, switching, fusing, current requirements, transformer applications, and motors and motor controls. Covers the basics of mechanical and electrical installations, emphasizes tool use and material selection, and electrical troubleshooting diagnosis and repair.

IMT 210 Pumps **3 Credits**

Prerequisites: IDS 104 - Fluid Power Basics. Covers the construction and operation of centrifugal, reciprocating, and rotary pumps and their components. Includes procedures of troubleshooting, installation, and maintenance.

IMT 211 Advanced Industrial Mechanics I **3 Credits**

Prerequisites: IDS 103 - Motors and Motor Controls, IMT 122 - Electrical Wiring Fundamentals, IMT 201 - Fluid Power Systems, IMT 203 - Machine Maintenance/Installation, and PHY 101 - Physics I. Examines the operation and design of mechanical systems, including belt drives, chain drives, gear boxes, bearings, and variable speed drives. Includes the proper use of portable power tools and the study of different materials.

IMT 212 Advanced Industrial Mechanics II **3 Credits**

Prerequisites: IMT 211 - Advanced Industrial Mechanics I. Continues Advanced Industrial Mechanics I with troubleshooting of the various mechanical drive systems. Includes the study of lubrication, seals, industrial pumps, steam distribution systems, and HVAC systems.

IMT 213 Pipe Fitting Basics **3 Credits**

Prerequisites: IDS 102 - Introduction to Print Reading. Acquaints the maintenance technician with a basic foundation and pipe fitting skills necessary to make repairs or new pipe layout. Includes determination of the type and quantity of material needed to complete a task and joining those materials in the proper manner with a minimum of supervision.

INT 101 Interior Design Theory **3 Credits**

Prerequisites: None. Introduces design theory and color dynamics as applied to interior composition. Includes exploration and application of three-dimensional entourage, human factors, and the psychology and social influences of space.

INT 102 Building Systems I **3 Credits**

Prerequisites: None. Provides an understanding of building structures, construction techniques, building materials, and blueprint reading. Includes familiarization with building codes and the preparation of plans, elevations, sections, and details as they relate to construction drawings.

INT 103 Introduction to Interior Design **3 Credits**

Prerequisites: None. Provides students with an overview of the field of interior design. Exercises include small-scale space analysis and functional planning based on user needs, application of the principles of design, furniture arrangement, finish selections, and presentation techniques.

INT 104 Textiles for Interiors **3 Credits**

Prerequisites: None. Provides an intensive study of textiles from fiber identification and classification to finish. Also introduces interior textile fabrications including window treatments, upholstery, carpet, and wallcoverings.

INT 105 Design Presentations **3 Credits**

Prerequisites: VIS 101 - Fundamentals of Design, INT 102 - Building Systems I, and INT 106 - Building Systems II. Presents the elements of two-and three-dimensional design concepts as related to interior representational drawings. Studies include audio-visual techniques, color rendering, and material boards for client presentations.

INT 106 Building Systems II **3 Credits**

Prerequisites: VIS 101 - Fundamentals of Design, INT 102 - Building Systems I, and INT 103 - Introduction to Interior Design. Presents the integration of building materials, structure, plumbing, HVAC, electrical, lighting, acoustics, and codes. Discussions include energy ecological conservation with a special emphasis on lighting theory and application.

INT 107 Color and Light **3 Credits**

Prerequisites: None. Introductory study of color theory, including additive and subtractive systems. Covers the effects of various types of lighting on color.

INT 108 Interior Design II **3 Credits**

Prerequisites: VIS 101 - Fundamentals of Design, INT 102 - Building Systems I, and INT 103 - Introduction to Interior Design. Involves students in the issues of concept development, programming, and space planning of the interior environment. Exercises reinforce creativity and problem solving skills. Emphasizes the relationship between individuals and their surroundings, including studies in human scale, proxemics, and design considerations for special populations.

INT 109 History of Interiors **3 Credits**

Prerequisites: None. Survey of the development of the interrelationship of architecture, interiors, furniture, and decorative arts from the Egyptian period to the present. Includes the designers that created these environments.

INT 201 Interior Finishes **3 Credits**

Prerequisites: INT 102 - Building Systems I, INT 103 - Introduction to Interior Design, INT 104 - Textiles for Interiors, INT 106 - Building Systems II, and INT 107 - Color and Light. Examines the physical properties and characteristics of various finish materials and architectural detailing including floor and wall treatments, window systems, furniture, fabric, and upholstery. Addresses problems in specifying, estimating, and installing these materials.

INT 202 Contract Design **3 Credits**

Prerequisites: Permission of program chair. Emphasizes the elements used by the designer in the development of non-residential interior spaces. Studies include technological and base building requirements; barrier-free, building and life safety codes; and square footage and space planning standards. Emphasis is placed on task analysis and workstation design, systems and equipment manufacturers, and finish selections within the office.

INT 203 Professional Practices **3 Credits**

Prerequisites: Permission of program chair. Introduction to business principles and practices as they relate to the Interior Design profession. Includes business formation and management, professional ethics and organizations, certification and licensing, design liability, and project management. Special topics involving consumer behavior, sales techniques, and fee structuring will also be addressed.

INT 204 Advanced Residential Design **3 Credits**

Prerequisites: Permission of program chair. Offers advanced studies in residential housing. Includes topics concerning universal design, the aging population, multifamily and mixed use housing, electronics in the home, trends in building materials and construction techniques, and environmental issues.

INT 205 Hospitality Design **3 Credits**

Prerequisites: Permission of program chair. Looks at the special considerations in designing for the hospitality industry. Includes such areas as meeting rooms, dining rooms, guestrooms and common areas as well as the intricacies of a restaurant layout from the furniture arrangement to personnel traffic patterns.

INT 206 Custom Design in Interiors **3 Credits**

Prerequisites: Permission of program chair. Creative development of original design for interior architectural features, furnishings, textiles, and accessory pieces. Includes material selection, construction and finish techniques, and presentation methods.

INT 207 Studio I **3 Credits**

Prerequisites: Permission of program chair. Laboratory experience with case studies designed to provide experience in creating a complete design selection.

INT 208 Studio II **3 Credits**

Prerequisites: Permission of program chair. Continues Studio I.

INT 209 Portfolio Preparation **3 Credits**

Prerequisites: Permission of program chair. Efforts are directed toward achieving a career in interior design. Includes development of a quality portfolio and resume, the National Council for Interior Design Qualification (NCIDQ) exam preparation, and adequate field experience. A workshop in resume writing, job hunting, interviewing, employment expectations, and human relations in the organization's structure will be provided.

INT 210 Project Management **3 Credits**

Prerequisites: Permission of program chair. In conference with a faculty advisor, students select an interior design project related to their area of emphasis. The project includes all phases of project programming, analysis of existing conditions, design criteria and adjacency studies, schematic and design development, contract documentation and administration, and the final project presentation. A signed contract must be filed with the department chairperson prior to enrollment.

INT 211 Kitchen and Bath Design **3 Credits**

Prerequisites: Permission of program chair. Requirements and space planning for kitchens, baths, and support systems. Includes both standardization and customizing of cabinetry and fixtures, as well as expectations for the areas in the planning process.

INT 212 Historic Preservation **3 Credits**

Prerequisites: Permission of program chair. The process of establishing historic properties will be researched. Preservation, restoration, and adaptive reuse will be differentiated as applied to both public and private properties.

INT 213 Internship I **3 Credits**

Prerequisites: Permission of program chair. Field placement or research project within students' occupational specialty, to include collection and analysis of data and work experience in business and industry.

INT 214 Internship II **3 Credits**

Prerequisites: Permission of program chair. Continuation of Internship I.

INT 215 Independent Study **3 Credits**

Prerequisites: Permission of program chair. Accommodates student's interest in specific areas or where there is a need to strengthen skills. Program chairperson's approval is required to elect non-program course work. If a design project is selected, the solution is expected to include all phases of professional interior research and practices, and must be portfolio quality. A signed contract must be filed with the program chairperson prior to enrollment.

INT 216 CAD for Interior Design **3 Credits**

Prerequisites: Permission of program chair. Investigation of the concepts, techniques, and skills required for computer-aided drafting. Students will learn efficient productivity of visual information: set-up, drawing methods, editing, zooming, dimensioning, block drawing, and print/plotting of computer graphic input.

INT 217 Retail Design **3 Credits**

Prerequisites: Permission of program chair. Introduces principles of display and special techniques and equipment required in display work.

INT 218 Health Care Facilities Design **3 Credits**

Prerequisites: Permission of program chair. Introduces the interior design of the health care environment. Includes such considerations as planning, health and safety codes, finishes, equipment, and furnishings specific to health care facilities installations.

INT 219 Special Projects **3 Credits**

Prerequisites: Permission of program chair. Students experience special projects individually or in a team situation. A signed contract must be filed with the department chairperson prior to enrollment.

INT 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Students work at job sites that are specifically related to career objectives. Provides on-the-job experience while earning credit toward an associate degree.

INT 281-293 Special Topics in Interior Design **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

IVY 100 Prior Learning Assessment **3 Credits**

Prerequisites: None. This course provides students an opportunity to document and present their college level learning which has resulted from their work/life experience. At the conclusion of this course, students will submit a complete learning portfolio which consists of a request for college credits, along with a detailed description of college level competencies for each course, and documentation to support their request.

LEG 101 Introduction to Paralegal Studies **3 Credits**

Prerequisites: None. Introduces the beginning student to the general concepts of the legal and paralegal fields. Topics include the American legal system, legal analysis and research, legal ethics and professional responsibility, and a survey of the major procedural and substantive areas of the law such as crimes, torts, contracts, and property law.

LEG 102 Legal Research and Writing **3 Credits**

Prerequisites: None. Includes the study and use of legal research tools such as digests, loose-leaf services, reporters, statutory compilations, and forms books. Presents legal writing format and methodology through practical application in drafting memoranda, correspondence, and selected forms. Emphasizes shepardizing and proper case citation skills.

LEG 103 Civil Procedures **3 Credits**

Prerequisites: None. Includes the study of selected Indiana trial rules and miscellaneous local rules. Presents filing requirements, calculation of deadlines, and certain pretrial techniques.

LEG 104 Torts **3 Credits**

Prerequisites: None. Includes a survey of the law of comparative negligence, product liability, defamation, false arrest, and other civil wrongs, including knowledge of the elements of such causes of action.

LEG 105 Business Associations and Transactions **3 Credits**

Prerequisites: None. Includes the study of various business structures and the formalities required for such structures. Surveys partnership, agency, and corporation law.

LEG 106 Torts and Claims Investigation **3 Credits**

Prerequisites: None. Studies witness interview techniques, preservation of evidence, organizational skills, and alternative methods of gathering facts. Emphasizes professional client intake and communication skills.

LEG 107 Contracts and Commercial Law **3 Credits**

Prerequisites: None. Surveys contract law and the Uniform Commercial Code. Presents special statutes regarding state unfair trade practices, consumer deception, and consumer rights.

LEG 108 Property Law **3 Credits**

Prerequisites: None. Includes a survey of the law of real and personal property. Gives practical exposure to title searches, loan documentation, zoning requirements, financing statements, leases, and deeds.

LEG 202 Advanced Trial Procedures **3 Credits**

Prerequisites: LEG 103 - Civil Procedures. Studies the Indiana Rules pertaining to actual trial. Reviews the discovery process and its tools. Presents skills such as organizing and retrieving documents, taking witness statements, and summarizing, indexing, and scheduling depositions. Surveys trial notebook preparation.

LEG 203 Law Office Management and Technology **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers, LEG 102 - Legal Research and Writing. Includes a survey of software support available to the law practitioner, such as litigation support and estate planning support. Presents the availability and use of research databases such as Dialog, Nexis, Lexis, and Westlaw.

LEG 204 Advanced Legal Writing **3 Credits**

Prerequisites: LEG 102 - Legal Research and Writing. Develops and enhances legal writing abilities with a focus on the relationship of legal writing to the legal process and the basics of technical writing with emphasis on the theoretical and practical applications of legal communications.

LEG 209 Family Law **3 Credits**

Prerequisites: None. Surveys the law of dissolution, custody, child support and visitations, marriage, and adoption. Presents financial declaration forms, client intake, Marion County Child Support Guidelines, and available social services.

LEG 210 Wills, Trusts, and Probate **3 Credits**

Prerequisites: None. Includes a survey of the law of estates, wills, probate, and guardianship, as well as intestate succession. Presents preparation of probate and administration forms, asset inventories and valuation, certain tax forms, and accounting.

LEG 211 Criminal Law **3 Credits**

Prerequisites: LEG 103 - Civil Procedures. Surveys Indiana criminal statutes and selected federal criminal laws. Emphasizes investigative and administrative skills.

LEG 212 Bankruptcy Law **3 Credits**

Prerequisites: None. Includes a survey of the Federal Bankruptcy Act. Stresses skills necessary to accumulate personal financial information, compile initial schedules, collect and organize data for first meeting of creditors, complete proofs of claim, and pursue certain creditor's rights.

LEG 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

LEG 281-293 Special Topics in Paralegal **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

LOG 101 Introduction to Materials Management **3 Credits**

Prerequisites: None. Studies factors influencing the flow of materials in a manufacturing enterprise. Covers basics of production planning and control, purchasing, forecasting, inventory, and distribution issues. Concludes with an overview of just-in-time theory and practices.

LOG 102 Manufacturing **3 Credits**

Prerequisites: None. Introductory manufacturing course. Focuses on basic principles, practices, and functions of manufacturing management. Includes applications in the service industries such as utilities, hospitals, and government.

LOG 103 Marketing **3 Credits**

Prerequisites: None. Introductory marketing course. Focus is on basic marketing strategy for targeting markets and developing a marketing mix of product, price, distribution, and promotion.

LOG 201 Transportation Systems **3 Credits**

Prerequisites: None. Provides in-depth knowledge of transportation systems and their inter-relationships with our economic, social, political and environmental systems.

LOG 202 Physical Distribution **3 Credits**

Prerequisites: None. Focuses on the major concepts and rationale for utilizing warehouse inventories to lower costs of transportation, improve customer service, avoid stockouts, improve purchasing economics and seasonal variability.

LOG 203 Sales Service **3 Credits**

Prerequisites: None. Designed to develop the art of selling. Sales knowledge and sales skills are applied to choices of products. Selling principles and the order processing cycle are emphasized.

LOG 204 Case Studies **3 Credits**

Prerequisites: None. Uses the case study method to apply the knowledge, principles, and skills acquired in student programs.

LOG 208 Distribution Center Management **3 Credits**

Prerequisites: None. Studies warehousing from a depositor and operator viewpoint. Includes warehousing functions, location and specific site criteria, labor productivity, cost controls, equipment, packaging, and customer service.

LOG 209 Export/Import I **3 Credits**

Prerequisites: None. Studies the practical application of export and import techniques and concepts, government regulations, documentation, and financial and transportation considerations of the movement of commerce from and to the United States.

LOG 210 Export/Import II **3 Credits**

Prerequisites: None. Familiarizes students with import practices, governmental regulations, and carrier rate-making practices. Requires students to complete practical exercises, solve importing problems, and work with the tariff schedule of the United States.

LOG 211 Transportation Pricing **3 Credits**

Prerequisites: None. Provides students with skills and techniques related to transportation pricing. Includes introduction, training, and practice in freight management, freight classification, tariff interpretation and selection, zip code pricing, contracts, and negotiations.

LOG 212 Freight Loss and Damage Claims **3 Credits**

Prerequisites: None. Covers appropriate methods for claims management, damage claims prevention, legal remedies for disputed claims, and transportation regulations.

MEA 102 First Aid and CPR **2 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies, and apply appropriate first aid, including CPR.

MEA 113 Pharmacology **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Discusses the most common medications in current use with emphasis on classifications, uses, routes of administration, dosages, interactions, incompatibilities, and side effects. Emphasizes the 50 most commonly prescribed drugs listed in *Pharmacy Times*. Addresses special precautions, legal aspects, patient education, and preparation and administration of medications.

MEA 114 Medical Assisting Laboratory Techniques **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Prepares student to perform various basic laboratory procedures, including preparation of patients, collecting and preparing appropriate specimens, and expected norms of laboratory test results. Includes current safety and quality control standards.

MEA 115 Medical Insurance **2 Credits**

Prerequisites: None. Provides an overview of medical insurance programs and skills developed in handling insurance forms, CPT and ICD-9-CM Coding and reports as applied to the medical office.

MEA 120 Medical Assisting Clinical Externship **3 Credits**

Prerequisites: MEA 133 - Clinical Theory and MEA 134 - Clinical Skills Lab. Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected physicians' offices, clinics, or hospitals.

MEA 121 Medical Assisting Administrative Externship **3 Credits**

Prerequisites: MEA 115 - Medical Insurance, MEA 130 - Medical Office Administration, MEA 131 - Medical Financial Management, MEA 132 - Computer Concepts in the Medical Office, and MEA 135 - Medical Typing and Transcription. Provides opportunities to observe, perform, and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians' offices, clinics, or hospitals.

MEA 130 Medical Office Administration **2 Credits**

Prerequisites: None. Provides an understanding of the administrative duties and responsibilities pertinent to medical offices. Develops communications skills specifically directed toward a medical office and the role of the professional medical assistant as a member of the health care team. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties and processing mail. Includes development of desirable personality traits, interpersonal relationships, and attitudes within the medical office.

MEA 131 Medical Financial Management **3 Credits**

Prerequisites: None. Provides instruction in medical office financial administration, bookkeeping, and materials management.

MEA 132 Computer Concepts in the Medical Office **2 Credits**

Prerequisites: Keyboard 25 WPM. Familiarizes students with computer applications in the health care setting. Provides students with basics of operations and applications of computer usages within the health care provider office. Includes simulated data entry for patient records, procedures and diagnostic codes, insurance processing, and electronic transmission of claims and scheduling day-sheet transactions in accordance with the AAMA DACUM guidelines.

MEA 133 Clinical Theory **3 Credits**

Prerequisites: None. Presents theory related to clinical aspects of the medical office. Includes theory related to vital signs, asepsis, sterilization, medication administration, EKG's, X-ray, nutrition, physical therapy, and other skills needed to assist the physician in the clinical setting.

MEA 134 Clinical Skills Lab **2 Credits**

Prerequisites: None. Allows students to become familiar with clinical duties and gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, medications, EKGs, X-ray, nutrition, physical therapy, and other technical skills needed to assist the physician.

MEA 135 Medical Word Processing/Transcription **3 Credits**

Prerequisites: Keyboard 25 WPM. Develops skills and knowledge of medical dictation, machine transcription, and use of word processors and typewriters. Includes typing and transcription of medical reports, terminology, and correspondence.

MEA 140 Basic Home Health Aide Training **3 Credits**

Prerequisites: None. Presents knowledge considered necessary for providing a general range of home health aide services. Addresses care for a variety of patient populations and focuses on theory behind home health skills.

MEA 141 Advanced Home Health Aide Training **2 Credits**

Prerequisites: MEA 140 - Basic Home Health Aide Training. Presents advanced topics related to care for homebound clients. Criteria for safely and accurately performing a variety of home health aide skills will be explored Skills required to function as a home health aide will be taught and evaluated through competency check-offs. Experience at a home health agency employing home health aides is included.

MEA 142 Body Systems and Disease **3 Credits**

Prerequisites: None. Presents basic concepts of anatomy and physiology along with the study of disease. Includes signs and symptoms of diseases and their impact on the function of various body systems. Explores maintaining optimal health in the presence of a disease. Includes discussion of patient's role in the management of the disease process.

MEA 143 Home Health Care Terminology **2 Credits**

Prerequisites: None. Explores a system of analysis for basic medical terms. Includes practice in correct spelling of medical terms along with exploration of various medical abbreviations. Emphasizes medical terms and abbreviations specific to the home health care forum.

MEA 151 Pharmacy Technician I **3 Credits**

Prerequisites: None. Introduces basic skills and information needed to qualify as a Pharmacy Technician in the state of Indiana.

MEA 152 Pharmacy Technician II **3 Credits**

Prerequisites: MEA 151 - Pharmacy Technician I. Theory is applied through performance of competency levels of the technical pharmacy task including: properly preparing, documenting and processing prescriptions according to pharmacy policy and regulations; preparing intravenous and special solutions; properly preparing and maintaining records appropriate to the pharmacy, including quality control records, controlled substances (narcotic drug distribution), prescription data and records; applying basic principles of microbiology, using aseptic techniques; and operating and maintaining the laminar hood. The student will employ proper communication skills (both written and verbal). Identification and adherence to check points will be emphasized. Current national and Indiana law and administrative rules as they relate to the practice of the pharmacy technician will be presented. The importance of adherence to universal precautions will be discussed.

MEA 153 Administrative Aspects of Pharmacy Technology **2 Credits**

Prerequisites: None. Addresses the administrative aspect of pharmacy technology, including professional development, professional communication, time management, record keeping, computer applications, third party payment processing, operation of business machines, and utilization of reference material.

MEA 154 Pharmacy Externship **2 Credits**

Prerequisites: MEA 151 - Pharmacy Technician I. Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected retail pharmacies and/or hospitals.

MEA 203 Disease Conditions **3 Credits**

Prerequisites: None. Presents the basic concepts of diseases, their courses, and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.

MEA 209 Electrocardiograph - Basic Technique **1 Credit**

Corequisites: MEA 210 - Introduction to EKG Interpretation. Presents the basic reasons for prescribing an electrocardiograph and the theory involved. The physiological principles involved are the basis for proper techniques that will be practiced by the students until they demonstrate competency with both the theory and required skills in doing a prescribed electrocardiograph.

MEA 210 Introduction to EKG Interpretation **2 Credits**

Prerequisites: None. Includes anatomy and physiology of the cardiovascular system and recognition of basic arrhythmias. Measurement of the EKG complex will be taught with the emphasis placed upon determining heart rates and rhythms.

MEA 211 Advanced Electrocardiograph Interpretation **3 Credits**

Prerequisites: MEA 210 - Introduction to EKG Interpretation. Includes anatomy and physiology of the cardiovascular system, interpretation of rhythm strips and 12 lead EKGs, and the cardiovascular drugs associated with arrhythmias.

MEA 212 Phlebotomy **3 Credits**

Prerequisites: MEA 114 - Medical Assisting Laboratory Techniques or program advisor approval. Presents the principles and practices of laboratory specimen collection and processing. Also covers medical terminology, infection control, patient identification, anatomy and physiology, anticoagulants, blood collection, specimen processing, and interpersonal skills.

MEA 213 Advanced Insurance Coding **3 Credits**

Prerequisites: MEA 115 - Medical Insurance or program advisor approval. Introduces the medical office administrator to codes necessary to bill insurance claims and provides experience in coding claim forms using the correct combination of codes to maximize reimbursement.

MEA 214 Advanced First Aid and CPR **3 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Handling of victims of hazardous materials accidents will be addressed. Covers CPR, including one and two rescuer. Teaches adult, infant, and child resuscitation.

MEA 215 Advanced Medical Terminology **3 Credits**

Prerequisites: HHS 101 - Medical Terminology. Includes more detailed and advanced study of the derivatives of medical terms, symbols, and signs. Presents an in-depth study of the correlation between medical vocabulary and the application of those terms to the anatomy and physiology of the body, related diseases, conditions, and treatment.

MEA 216 Nutrition **2 Credits**

Prerequisites: None. Presents the importance of a balanced diet; methods of evaluating a diet; the basic four food groups; the functions, requirements and food sources of fats, proteins, carbohydrates, vitamins, and minerals, and the deficiency diseases. Introduces meal planning, nutrition for various age groups, religious and nationality food habits, and diet therapy. Explains special diets for diabetes, diseases of the GI tract, urinary tract, blood, cardiovascular system, obesity, cancer, allergy, and pregnancy.

MEA 217 Gerontology **3 Credits**

Prerequisites: None. Presents a multidisciplinary study of the sociological, psychological, and physiological aspects of aging. Included will be patient education and the impact that all facets of aging have on the total person.

MEA 221 Seminar I **1 Credit**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities, and seminars may be utilized.

MEA 222 Seminar II **2 Credits**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities, and seminars may be utilized.

MEA 223 Seminar III **3 Credits**

Prerequisites: None. Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the medical assistant program. Field trips, guest speakers, audio-visual activities, and seminars may be utilized.

MEA 224 Hospital Coding **3 Credits**

Prerequisites: MEA 213 - Advanced Insurance Coding or advisor approval. Builds on the comprehensive coding skills acquired through prerequisite course MEA 213. Introduces additional instruction in diagnostic related groups (DRG's) and medical record extraction. Provides discussion, observation, and performance opportunities in related insurance coding competencies. Both classroom and clinical sites are used to provide realistic experiences under supervision. External sites include physicians' offices, clinics, and hospitals.

MEA 225 Insurance Coding Externship **3 Credits**

Prerequisites: Advisor approval. Provides opportunities to observe, perform, and discuss various insurance related competencies under supervision, with learning experience obtained in selected physicians' offices, clinics, or hospitals.

MEA 226 Medical Assisting - Advanced Clinical Procedures **3 Credits**

Prerequisites: MEA 133 - Clinical Theory and MEA 134 - Clinical Skills Lab. Advances the knowledge and skills enabling the student to assist in clinical management in the medical and surgical specialties. Addresses health services in the community which are directed toward prevention of disease and maintenance and restoration of health.

MEA 227 Advanced Administrative Procedures **3 Credits**

Prerequisites: MEA 130 - Medical Office Administration. Provides an in-depth study of various influences on office functions concerning organization and management of a physician's office. Includes government and professional sources for consultation.

MEA 228 Ophthalmic Dispensing **3 Credits**

Prerequisites: None. Includes the study of frame types and parts, facial measurements for fitting, functional and cosmetic aspects of frame selection, and frame alignment, adjusting, and repair. Contact lenses, types, care, insertion and removal methods, modifications, polishing, and patient evaluation and education also are covered.

MEA 229 Nurse Aide Procedures and Practicum **3 Credits**

Prerequisites: None. Prepares beginning level nurse aides with the knowledge, skills, and attitudes essential for providing basic nursing care. Students who pass this course will receive a Nurse Aide Certificate. (Note: Contact hours are specified by the Indiana State Board of Health.)

MEA 230 Structure and Function of the Eye **2 Credits**

Prerequisites: None. Familiarizes the student with the structure and function of the human eye. Pathological conditions will also be covered.

MEA 231 Basic Optics **3 Credits**

Prerequisites: None. Acquaints the student with basic optical principles. Fundamental properties of lenses and mirrors and how they relate to the correction of visual problems will be discussed. Types of optical defects commonly associated with vision will be covered. The student will be introduced to optometric instrumentation, fundamental soft lens formulas, and visual field screening.

MEA 232 Clinical Optometric/Ophthalmic Practicum **2 Credits**

Prerequisites: None. This "hands on" field experience allows the student to put into practice, under supervision, skills and knowledge obtained in class and labs.

MEA 233 Health Unit Coordinator **5 Credits**

Prerequisites: None. Prepares students to provide reception and clerical support to the nursing unit to facilitate the delivery of nursing care. Students will gain skills in communication methods, problem solving, transcription processes, classification of orders, and appropriate documentation procedures.

MEA 234 Phlebotomy Externship **3 Credits**

Prerequisites: MEA 212 - Phlebotomy. Provides the opportunity to discuss and perform phlebotomy procedures under supervision with learning experiences obtained in selected laboratories, physicians' offices, clinics, or hospitals.

MEA 235 Advanced Transcription **3 Credits**

Prerequisites: MEA 135 - Medical Wordprocessing/Transcription. Improves accuracy and speed of the medical transcriptionist utilizing various formats for medical transcription.

MEA 281-293 Special Topics in Medical Assistant **1-5 Credits**

Prerequisites: Advisor approval. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

MEA 299 CMA Comprehensive Review **3 Credits**

Prerequisites: None. Corequisites: Advisor approval. Reviews the entire medical assisting program in preparation for the CMA registry examination. Administration, clinical, and general information are covered. Testing procedures are addressed. Emphasis is placed on job readiness and placement. The course earns continuing education units for graduate CMAs to fulfill their certification renewal requirements.

MKT 101 Principles of Marketing **3 Credits**

Prerequisites: None. Introduces the marketing role in society and how it affects the marketing strategy. Emphasizes the marketing mix, product planning, and the effects of the demographic dimension on the consumer market.

MKT 102 Principles of Selling **3 Credits**

Prerequisites: None. Provides an overview of the selling process. Includes the psychology of selling and develops skills through a series of selling situations.

MKT 104 Promotion Management **3 Credits**

Prerequisites: None. Presents management planning and oversight techniques for effectively communicating the results of the marketing strategy to customers. Provides a comprehensive overview of promotion methods as they interact in the marketing mix, which includes price, channel of distribution, and product. Everything the company does has potential for promotional impact for the customers, which therefore requires effective management to pursue its marketing objectives in the target market.

MKT 110 Consumer Behavior **3 Credits**

Prerequisites: None. Study of the basic principles of consumer behavior which offers insight into the buyer-seller relationship. Application of theories from psychology, social psychology, and economics are examined. Course examines concepts that have implications for marketing management decisions.

MKT 201 Introduction to Market Research **3 Credits**

Prerequisites: MKT 101 - Principles of Marketing and MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Presents basic research methods entailing procedures, questionnaire design, data analysis, and effectively communicating research results.

MKT 202 Logistics/Purchasing Control **3 Credits**

Prerequisites: MKT 101 - Principles of Marketing or BUS 101 - Introduction to Business. Introduces students to the framework of logistics, the logistics environment, customer services, and materials management. Introduces material resources planning (MRP) and just-in-time (JIT) principles.

MKT 204 Marketing Management **3 Credits**

Prerequisites: Departmental approval. Focuses on the analysis, implementation, and control of marketing strategy. Emphasizes the major decisions management faces in its effort to harmonize the objectives and resources of the organization with the needs and opportunities of the marketplace.

MKT 205 Principles of Insurance **3 Credits**

Prerequisites: None. Introduces the risks faced by business firms, including property, liability and personal losses, and how they are handled. Presents insurance contracts and their uses. Includes an overview of life insurance, health and pension insurance, public policy, government regulations, and social insurance.

MKT 206 Sales Management **3 Credits**

Prerequisites: MKT 102 - Principles of Selling (or) departmental approval. Studies the role of the sales manager emphasizing the leadership function. Focuses on building a sales team, judging sales performance, territorial management, sales recruiting and interviewing, training, and managing the field sales office. Includes sales support and liaison, property, liability, and operations.

MKT 207 Public Relations **3 Credits**

Prerequisites: None. Provides broad coverage of the public relations field and acquaints students with the role of effective internal and external public relations in business and industry. Examines the goals and benefits of public relations, the tools of the public relations practitioner, and the principles and trends of the field.

MKT 219 Field Study/Cooperative Education **4 Credits**

Prerequisites: None. Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides field experience within the framework of actual work experience in marketing.

MKT 220 Principles of Retailing **3 Credits**

Prerequisites: MKT 101 - Principles of Marketing and MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Studies retailing concepts and practices, including retail merchandise planning, buying, pricing, promotion, and control in established retail operations. Attention is given to managerial and operational skills.

MLT 101 Fundamentals of Laboratory Techniques **3 Credits**

Prerequisites: Advisor approval. Introduces elementary skills required in the medical laboratory. Covers laboratory math, quality control, pipetting skills, venipuncture techniques, and microscope skills.

MLT 102 Routine Analysis Techniques **3 Credits**

Prerequisites: Advisor approval. Studies principles, practices, and clinical laboratory techniques associated with routine analysis of urine and other body fluids.

MLT 196 Introduction to Patient Care and Phlebotomy **3 Credits**

Prerequisites: None. Introduces the health care delivery system. Provides instruction in specimen collection techniques, infection control and safety, and teaches applications of communications concepts and stress management.

MLT 197 Clinical Phlebotomy Experience **3 Credits**

Prerequisites: None. Covers the practice and demonstration of clinical applications of phlebotomy in the clinical setting.

MLT 198 Clinical Phlebotomy Discussion **1 Credit**

Prerequisites: None. Develops the professional socialization process necessary to function in a health care setting and reviews routine and special phlebotomy procedures in light of phlebotomist-patient interaction.

MLT 201 Immunology Techniques **3 Credits**

Prerequisites: Student is in good standing and currently enrolled in the MLT program. Provides students with an understanding of principles of the human immunologic system and experience in routine testing.

MLT 202 Immunohematology Techniques **3 Credits**

Prerequisites: MLT 201 - Immunology Techniques. Instructs students in practice and procedures used in blood banking in the clinical laboratory.

MLT 203 Instrumentation **2 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program. Includes instrumentation theory and practice as applied to electronic equipment and automated systems in the medical laboratory.

MLT 205 Hematology Techniques I **3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and MLT 101 - Fundamentals of Laboratory Techniques. Presents theory of blood formation and function and routine hematologic procedures with emphasis on differentiation of normal from commonly encountered abnormal blood cells. Includes basic theory of hemostasis and associated routine coagulation procedures. Presents clinicopathologic correlations.

MLT 206 Hematology Techniques II **3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and MLT 205 - Hematology Techniques I. Continues the study of principles and procedures in hematology and hemostasis. Introduces procedures beyond those routinely performed. Continues cell differentiation with emphasis on early and less commonly encountered abnormal cells and associated special stains. Includes clinicopathologic correlations.

MLT 207 Chemistry Techniques I **3 Credits**

Prerequisites: None. Corequisite: MLT 101 - Fundamentals of Laboratory Techniques. Presents principles, procedures, and clinicopathologic correlations in routine chemical analysis of the blood and other body fluids. Provides laboratory experiences in basic methods selected to develop routine analytical abilities and to promote the ability to recognize sources of error.

MLT 209 Routine Analysis Applications **1 Credit**

Prerequisites: MLT 102 - Routine Analysis Techniques. Studies clinical applications of routine urine analysis in the hospital laboratory including physical, chemical, and microscopic examination of urine.

MLT 210 Hematology Applications **3 Credits**

Prerequisites: MLT 206 - Hematology Techniques II. Studies and practices the principles and techniques of hematology in the hospital laboratory.

MLT 212 Immunology Applications **1 Credit**

Prerequisites: MLT 201 - Immunology Techniques. Studies and practices the clinical application of serology in the hospital laboratory.

MLT 213 Immunohematology Applications **3 Credits**

Prerequisites: MLT 202 - Immunohematology Techniques. Studies and practices the principles and procedures used in blood banking in the hospital laboratory.

MLT 215 Parasitology and Mycology **1 Credit**

Prerequisites: Student must be in good standing and currently enrolled in MLT program and MLT 222 - Microbiology Techniques. Provides study in the isolation, identification, life cycles, and disease processes of pathogenic fungi and parasites.

MLT 216 Elementary Organic and Biochemistry **3 Credits**

Prerequisites: CHM 101 - Chemistry I. Studies the chemistry of carbon-containing compounds and the biochemistry of lipids, carbohydrates, proteins, nucleic acids, and enzymes. Includes related laboratory procedures.

MLT 217 Advanced Chemistry Technology **1 Credit**

Prerequisites: Student must be in good standing and currently enrolled in MLT program. Presents principles and techniques of chemistry procedures beyond routine clinical chemistry testing, such as toxicology, endocrinology, and inborn errors of metabolism.

MLT 218 Clinical Pathology **3 Credits**

Prerequisites: Student must be enrolled in the MLT program and have a GPA of C or above. Examines various disease conditions, diagnosis, etiologies, clinical symptoms, and related laboratory findings.

MLT 221 Microbiology Applications **3 Credits**

Prerequisites: MLT 222 - Microbiology Techniques. Studies applications and clinical practices of microbiology found in the hospital laboratory.

MLT 222 Microbiology Techniques **3 Credits**

Prerequisites: Student is in good standing and currently enrolled in MLT program and BIO 211 - General Microbiology or equivalent recommended. Instructs students in principles of bacteriology, including gram negative and positive bacilli and cocci, fastidious organisms, and an overview of anaerobic and acid-fast bacteria. Includes instruction in the basic laboratory techniques in clinical bacteriology.

MLT 224 Chemistry Applications **3 Credits**

Prerequisites: MLT 207 - Chemistry Techniques I. **Corequisites:** MLT 227 - Chemistry Techniques II. Studies and practices the analytical aspects of clinical chemistry in the hospital laboratory.

MLT 227 Chemistry Techniques II **2 Credits**

Prerequisites: MLT 207 - Chemistry Techniques I. Continues the study of principles, procedures, and clinicopathologic correlations in the chemical analysis of blood and other body fluids. Introduces procedures beyond those routinely performed in the clinical chemistry laboratory, including clinicopathologic correlations.

MLT 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

MTT 101 Introduction to Machining **3 Credits**

Prerequisites: None. Instructs students in shop safety, industrial terminology, tools and machine tooling, measurement, and layout. Includes laboratory exercises to begin project completion of turning, milling, and grinding applications.

MTT 102 Turning Processes I **3 Credits**

Prerequisites: None. Instructs students in shop safety and industrial terminology and provides laboratory experience toward project completion on the conventional lathe.

MTT 103 Milling Processes I **3 Credits**

Prerequisites: None. Instructs students in shop safety and industrial terminology and provides laboratory experience towards project completion on the vertical and/or horizontal milling machine.

MTT 104 Machinery Handbook **3 Credits**

Prerequisites: Equivalent of MTT 101 - Introduction to Machining and its prerequisites as determined by advisor. Explores the intent and use of the machinery handbook. Applies principles and concepts in the machinery handbook to projects in the industry.

MTT 106 Advanced Print Interpretation **3 Credits**

Prerequisites: MTT 101 - Introduction to Machining or advisor approval. Applies mathematics in solving engineering and design-related problems in the areas of die design, fabrication, assembly, special machinery, die casting, and molds. Emphasizes GDT tolerancing.

MTT 110 Turning and Milling Processes **3 Credits**

Prerequisites: TEC 101 - Manufacturing Processes, recommend MTT 101 - Introduction to Machining. Provides shop safety, industrial terminology, and laboratory experiences on conventional lathe and milling machines.

MTT 202 Advanced Turning Processes II **3 Credits**

Prerequisites: MTT 102 - Turning Processes I or MTT 110 - Turning and Milling Processes and its prerequisites as determined by advisor. Instructs students in shop safety and industrial terminology.

MTT 203 Milling Processes II **3 Credits**

Prerequisites: MTT 103 - Milling Processes I or MTT 110 - Turning and Milling Processes. Covers shop safety, industrial terminology, and provides advanced laboratory experience towards project completion on the vertical and/or horizontal milling machine.

MTT 204 Abrasive Processes I **3 Credits**

Prerequisites: TEC 101 - Manufacturing Processes. Provides shop safety, industrial terminology, and laboratory experiences on abrasive processing machines. Includes superabrasives technology processes.

MTT 205 Abrasive Processes II **3 Credits**

Prerequisites: MTT 204 - Abrasive Processes I. Emphasizes shop safety, industrial terminology, and provides advanced laboratory experience towards project completion on a variety of abrasive processing machines.

MTT 206 Tooling Design I **3 Credits**

Prerequisites: MTT 110 - Turning and Milling Processes. Introduces concepts of tooling design, assembly, and standards of fabrication. Emphasizes jig and fixture design/components, application, and operational characteristics.

MTT 207 Tooling Design II **3 Credits**

Prerequisites: MTT 206 - Tooling Design I. Covers concepts of tooling design, assembly, and standards of fabrication. Emphasizes blanking, piercing and progressive type dies, design/components including application and operational characteristics.

MTT 208 CNC Programming I **3 Credits**

Prerequisites: MAT 121 - Geometry-Trigonometry or MAT 131 - Algebra/Trigonometry I or advisor approval. Introduces two and three axis CNC machining. Develops the theory of programming in the classroom with application of the program accomplished on industry-type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation.

MTT 209 CNC Programming II **3 Credits**

Prerequisites: MTT 208 - CNC Programming I or advisor approval. Expands on MTT 208, providing further study in computer-aided numerical control programming. Focuses on canned cycles, loops, macros, thread cycles, drilling, and pocket milling cycles.

MTT 210 Interactive CNC **3 Credits**

Prerequisites: MTT 106 - Advanced Print Interpretation, MTT 208 - CNC Programming I, MAT 121 - Geometry-Trigonometry, and computer competencies as determined by advisor. Continues MTT 209 - CNC Programming II. Introduces advanced applications of computer-assisted part programming and simulation, language codes set-up and operation, troubleshooting and problem solving in a CNC turning center and CNC matching center. Includes related mathematical skills.

MTT 211 Advanced Programming Techniques **3 Credits**

Prerequisites: MTT 210 - Interactive CNC. Includes the application of advanced CNC programming techniques to industrial machining. Uses downloading and uploading techniques through advanced projects.

MTT 220 CAD/CAM I **3 Credits**

Prerequisites: MTT 208 - CNC Programming I, DCT 113 - Intermediate CAD, DSN 220 - Advanced CAD, or equivalent as determined by advisor. Covers the development of various machine routines. Introduces computer-assisted machining as it relates to automated milling and machining centers. Emphasizes proper programming techniques, control familiarity, file data, and machining functions.

MTT 221 CAD/CAM II **3 Credits**

Prerequisites: MTT 220 - CAD/CAM I or equivalent as determined by advisor. Covers the development of 3-D shapes and the codes necessary to produce parts. Requires students to design a new product or modify an existing design. Includes creating surface curves. Focuses on creating toolpaths for complex 3D surfaces.

MTT 222 CAD/CAM III **3 Credits**

Prerequisites: MTT 221 - CAD/CAM II or equivalent as determined by advisor. Covers the development of geometry and codes necessary for machining an actual part. Introduces computer-assisted machining as it relates to automated lathes and turning centers. Emphasizes proper programming techniques, control familiarity, file data, and machining functions.

NUR 150 Nursing and Universal Needs **4 Credits**

Prerequisites: Admission to program. **Corequisites:** NUR 151 - Nursing and Universal Needs Practicum. Provides fundamental facts, concepts, principles, and rationales necessary to meet universal healthcare needs. Introduces the five components of the nursing process and the roles of the associate degree nurse.

NUR 151 Nursing and Universal Needs Practicum **4 Credits**

Prerequisites: Admission to program. Corequisites: NUR 150 - Nursing and Universal Needs. Simulated and actual patient care situations provide an opportunity to develop interpersonal and psychomotor skills. Initiates a beginning level of assessing, analyzing, planning, implementing, and evaluating therapeutic measures in meeting basic universal healthcare needs. Provides an opportunity in the laboratory and clinical setting to explore the role of the associate degree nurse.

NUR 152 Nursing Related to Health Deviation I **5 Credits**

Prerequisites: NUR 150 - Nursing and Universal Needs and NUR 151 - Nursing and Universal Needs Practicum. Corequisites: NUR 153 - Nursing Related to Health Deviation I Practicum. Defines the role of the associate degree nurse in assisting clients experiencing health deviations related to nutrition/elimination, rest/activity, safety, and homeostasis. The nursing process is utilized to promote, maintain, and restore health or support death with dignity in the adult client.

NUR 153 Nursing Related to Health Deviation I Practicum **5 Credits**

Prerequisites: NUR 150 - Nursing and Universal Needs and NUR 151 - Nursing and Universal Needs Practicum. Corequisites: NUR 152 - Nursing Related to Health Deviation I. Provides experience that enables the student to progress in the role of the associate degree nurse when providing care to adult clients experiencing health deviations. The nursing process guides the application of scientific facts, concepts, principles, and rationales in the delivery of nursing care. Psychomotor skills and appropriate therapeutic communication are emphasized.

NUR 154 Pharmacotherapeutics **2 Credits**

Prerequisites: Admission to program. Introduces the student to the fundamental principles of drug action, the classification of drugs and the appropriate nursing actions to achieve the desired outcomes of therapy. The nursing process as a framework for learning is integrated throughout the course.

NUR 249 Transition to ASN Nursing **3 Credits**

Prerequisites: Admission to program, ANP 101 - Anatomy and Physiology I, ANP 102 - Anatomy and Physiology II, ENG 111 - English Composition, MAT 111 - Intermediate Algebra, PSY 101 - Introduction to Psychology, current Indiana LPN license, and official transcript from PN program. Examines the role of the associate degree nurse. Identifies components of the ASN program philosophy. Reviews the facts, concepts, and principles underlying the nursing process. Laboratory and clinical experience is provided to review basic nursing skills and assist the student in identifying appropriate nursing responses to health deviation needs.

NUR 250 Nursing Related to Health Deviation II **5 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation Needs I and NUR 153 - Nursing Related to Health Deviation Needs I Practicum. Corequisites: NUR 251 - Nursing Related to Health Deviation II Practicum. Defines the role of the associate degree nurse in assisting clients experiencing health deviations related to oxygenation, social interaction/solitude and continued health deviations of safety and homeostasis. The nursing process with emphasis on planning, intervention, and evaluation is utilized to promote, maintain, and restore health or support death with dignity in the adult client. Leadership skills and advanced therapeutic communication are also emphasized.

NUR 251 Nursing Related to Health Deviation II Practicum **5 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 250 - Nursing Related to Health Deviation II. Provides experiences that allow the student to further refine the role of the associate degree nurse in providing care to clients experiencing health deviations. The nursing process guides the application of scientific facts, concepts, and principles in the delivery of nursing care. Leadership skills and advanced therapeutic communication are also applied.

NUR 252 Nursing Related to Developmental Needs **4 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 253 - Nursing Related to Developmental Needs Practicum. Identifies the role of the associate degree nurse in assisting clients to meet their developmental needs which includes the maintenance of conditions to support life processes and maturation. Utilizes the nursing process with emphasis on planning, implementation, and evaluation. It will be utilized to evaluate therapeutic measures that promote, maintain, and restore health or support death with dignity.

NUR 253 Nursing Related to Developmental Needs Practicum **4 Credits**

Prerequisites: NUR 152 - Nursing Related to Health Deviation I and NUR 153 - Nursing Related to Health Deviation I Practicum. Corequisites: NUR 252 - Nursing Related to Developmental Needs. Provides experiences that allow the student to further refine the role of the associate degree nurse when providing care to the childbearing and childbearing family experiencing developmental needs which includes the maintenance of conditions to support life processes and maturation. The nursing process guides the application of scientific facts, concepts, principles, and rationales in the delivery of nursing care. Decision making and appropriate therapeutic communication are also emphasized.

NUR 254 Professional Nursing Issues **2 Credits**

Prerequisites: Successful completion of previous semester. Examines issues and nursing's responsibility to meet changing needs of persons in their environment. Historical aspects, current developments, future trends, improvement of nursing practice, legal/ethical considerations, and personal/professional growth are integrated into the examination of the role of the associate degree nurse.

OAD 019 Keyboarding **3 Credits**

Prerequisites: None. Provides students with the fundamentals of keyboarding using the touch method. Emphasizes mastery of the keyboard, development of formatting skills, and development of speed and accuracy.

OAD 029 Speed and Accuracy Development **1 Credit**

Prerequisites: OAD 019 - Keyboarding. Designed to diagnose individual keyboarding speed and accuracy skills and bring those skills to an employable level.

OAD 103 Word Processing Applications **3 Credits**

Prerequisites: None. Introduces the concepts of word processing systems. Offers hands-on experience in the operation of a specific word processing software package.

OAD 108 Shorthand/Notetaking I **3 Credits**

Prerequisites: None. This course introduces basic principles of a note-taking system. Emphasis is placed on note-taking techniques, legibility, and mastery of the basic vocabulary. Dictation and transcription of material is included.

OAD 110 Presentation Graphics **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent. Provides "hands-on" experience and familiarizes students with specific advanced design and layout techniques and practical applications of business presentations.

OAD 114 Desktop Publishing **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent. Emphasizes the production of publication-quality documents. Attention is given to design and layout principles and production techniques. Fonts, graphics, and page composition are integrated into camera-ready documents using computer software and hardware.

OAD 116 Essentials of Business Correspondence **3 Credits**

Prerequisites: ENG 025 - Introduction to College Writing II. An intensive, competency-based business correspondence course that involves grammar, word usage, pronunciation, punctuation, proofreading, spelling, vocabulary building, and other language skills that are essential to good workplace communication.

OAD 119 Document Processing **3 Credits**

Prerequisites: Entry level proficiency of 35 gwpm and basic formatting. Emphasis is placed on increasing speed, improving accuracy, developing and applying formatting skills, applying communication and language arts skills, and developing document production techniques.

OAD 121 Office Procedures **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Prepares the student to understand and carry out responsibilities assigned in a business office. Topics include telephone techniques, office equipment, travel and conference arrangements, professional development, research techniques, time and stress management, and business ethics.

OAD 203 Advanced Word Processing **3 Credits**

Prerequisites: OAD 103 - Word Processing Applications or advisor approval. Develops the ability to transfer information processing skills to a second word processing package.

OAD 207 Integrated Applications **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers or equivalent experience. Explores the advanced features of an integrated office software package using word processing, spreadsheets, databases, and presentation graphics.

OAD 208 Shorthand/Notetaking II **3 Credits**

Prerequisites: OAD 108 - Shorthand/Notetaking I. Emphasizes the use of language arts skills and production skills in applying the principles of a notetaking system. Emphasis is placed on the use of reference materials to produce accurate documents. Dictation and transcription of material is included.

OAD 211 Medical Transcription **3 Credits**

Prerequisites: HHS 101 - Medical Terminology and OAD 119 - Document Processing with an entry-level speed of +0 GWAM with a 5 error limit. Develops skills and knowledge of medical transcription utilizing medical reports, terminology, and correspondence.

OAD 214 Multimedia Design **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Continues the production of publication-quality documents. Attention is given to design and layout principles and production techniques. Color and editing graphics and photographs will be introduced. Students will also apply their design skills to preparing documents for electronic publishing on the World Wide Web.

OAD 215 Legal Transcription **3 Credits**

Prerequisites: OAD 119 - Document Processing with an entry-level speed of 40 GWAM with a 5 error limit. Provides hands-on training in formatting legal correspondence and court documents in the basic areas of law. Students will learn specialized rules of punctuation, terminology, and standards for legal documents. In a laboratory setting, students will learn how to use a transcribing machine to produce legal documents from tape dictation.

OAD 216 Business Communications **3 Credits**

Prerequisites: ENG 111 - English Composition, CIS 101 - Introduction to Microcomputers. Emphasizes analysis of business communication environments—cultural, organizational, technological, international, and interpersonal—and the use of communications standards to direct the choice of oral and written communication methods and techniques. It includes practice in writing a variety of messages used to communicate in business and industry with an emphasis on the potential impact of the message on the receiver as a basis for planning and delivering effective business communications.

OAD 217 Problem Solving for Computer Users **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Introduces the organization, structure, and functions necessary for managing and maintaining information systems within a business organization. Presents the student with basic computer system concepts such as file and resource management, device drivers, file structures, hard disk organization, software installation, upgrading and maintenance, and fundamental data security techniques. These concepts will be incorporated into practical applications.

OAD 218 Spreadsheets **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers, ACC 101 - Accounting Principles I. Provides an in-depth understanding of worksheet design, charting, what-if analysis, worksheet database creation and manipulation, and OLE. Knowledge and use of a spreadsheet will be applied to various business applications. Integration of spreadsheets in other applications will be addressed.

OAD 220 Records and Database Management **3 Credits**

Prerequisites: CIS 101 - Introduction to Microcomputers. Focuses on the management and control of documents from creation to disposition using manual, automated, and electronic media. Examines filing procedures, records management personnel, and equipment. Uses database software to create, modify, query, and report information from a database.

OAD 221 Office Administration and Supervision **3 Credits**

Prerequisites: OAD 103 - Word Processing Applications, OAD 216 - Business Communications, and OAD 121 - Office Procedures. Completion of minimum of 45 credits toward degree. Emphasizes management of office functions. Key topics include personnel, team building, ergonomics, project management, and leadership styles. Case studies and role playing projects are included. Students will also complete the program outcomes assessment tool.

OAD 226 Advanced Electronic Spreadsheets **3 Credits**

Prerequisites: OAD 218 - Spreadsheets. Continues the study of electronic spreadsheets in business. Emphasizes the advanced application of electronic spreadsheets.

OAD 280 Co-op/Internship/Externship/Practicum **1-6 Credits**

Prerequisites: OAD 103 - Word Processing Applications, OAD 216 - Business Communications, and OAD 121 - Office Procedures. Completion of minimum of 45 program credits toward degree or advisor approval. Students gain on-the-job experience while earning college credits towards an associate degree.

OAD 281-293 Special Topics in Office Administration **1-3 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

OPM 102 Techniques of Supervision I **3 Credits**

Prerequisites: None. Introduces basic employee development with emphasis on the responsibilities of a newly appointed supervisor. Emphasizes organizational structure, motivation, delegation of authority, interviews, orientation and induction of new employees, employee performance evaluations, and dealing with employee conflict.

OPM 103 Industrial Safety I **3 Credits**

Prerequisites: None. Covers the day to day responsibilities of management and supervision toward attaining an accident-free organization. Emphasizes first aid, fire prevention and control, safety procedures in starting and stopping machines, accident investigations, and other preventive measures. Covers methods of advertising good safety practices and rules of plant protection in relation to safety and OSHA.

OPM 104 Techniques of Supervision II **3 Credits**

Prerequisites: OPM 102 - Techniques of Supervision I. Develops skills for effective supervision of employees by utilizing analysis of cases, group discussion, in-basket exercises, and role-playing. Includes problem solving techniques, labor relations, legal guidelines, policy making, counseling troubled employees, effective communications, and human relations skills.

OPM 105 Business Management—Manufacturing **3 Credits**

Prerequisites: None. Introductory manufacturing course. Focuses on basic principles, practices, and functions of manufacturing management. Includes applications in the service industries, such as utilities, hospitals, and government.

OPM 202 Production Planning and Control **3 Credits**

Prerequisites: None. Emphasizes production planning concepts and inventory control techniques and applications. Includes the production function, design and development of products/services and inventory management, and quality control.

OPM 203 Reliability Objectives **3 Credits**

Prerequisites: MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Introduces development and principles of reliability engineering. Establishes mathematical and physical bases of reliability and applies basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

OPM 204 Mechanical Metrology **3 Credits**

Prerequisites: None. Provides instruction and laboratory experiments in the use of mechanical testing and measurement equipment for quality control.

OPM 205 Techniques of Leadership **3 Credits**

Prerequisites: OPM 102 - Techniques of Supervision I. Identifies approaches to effective leadership and discovers an appropriate personal leadership style. Explores specific qualities and skills needed for conference leadership (organizing, facilitating, controlling, summarizing, speaking, and problem defining and solving).

OPM 206 Time and Motion Study **3 Credits**

Prerequisites: None. Examines industrial applications of time and motion studies in establishing rates.

OPM 207 Manufacturing Costs and Value Analysis **3 Credits**

Prerequisites: None. Applies recognized techniques and tests to measure value and eliminate unnecessary cost in design, development, and manufacturing without affecting quality; differs from cost control in that it is directed toward analyzing value, not cost.

OPM 208 Materials Handling **3 Credits**

Prerequisites: None. Introduces procedures and quality controls pertaining to the handling and storing of industrial materials. Gives attention to shelf life of materials, weight and mass configuration, and specifications of vendor's materials.

OPM 209 Plant Layout and Process Planning **3 Credits**

Prerequisites: None. Introduces principles and practices of factory planning including layout fundamentals, layouts for small and medium sized plants, and selection of equipment for the production and handling of materials. Covers tooling determination and operational time, setup, and sequence. Emphasizes efficiency in the arrangement of work areas for reduction of costs.

OPM 210 Case Problems in Management **3 Credits**

Prerequisites: None. Applies quantitative and qualitative skills to case study problems in management. Presents solutions which demand planning, leadership, and financial analysis.

OPM 211 Labor Relations **3 Credits**

Prerequisites: None. Examines labor laws and practices pertaining to industrial relations. Covers development and application of laws, mediation conciliation, collective bargaining, arbitration, and handling of grievances.

OPM 212 Manufacturing Organizations I **3 Credits**

Prerequisites: None. Presents the organization of a typical manufacturing operation with attention to functional components and their interrelationships. Reviews organizational principles as they apply to the operation and examines the duties and responsibilities of the first-line supervisor. Develops the basic tools of managerial decision-making and applies them to typical case problems.

OPM 213 Manufacturing Organizations II **3 Credits**

Prerequisites: None. Explores quality control, research and development, marketing, production, inventory control, personnel, and maintenance functions. Involves forms of ownership, analysis of financial data, capital investment, and budgeting.

OPM 214 Industrial Safety II **3 Credits**

Prerequisites: OPM 103 - Industrial Safety I. Establishes procedures following an accident. Covers the preparation and maintenance of accident records, severity rates, worker's compensation, and insurance claims. Shows how effective safety programs are managed in compliance with the law and contractual agreements.

OPM 215 Purchase and Inventory Control **3 Credits**

Prerequisites: None. Discusses a practical approach to procurement of materials with regard to price, quality, quantity, and delivery. Examines the purchasing department's place in the organizational structure. Defines responsibility of the purchasing department and its relationship to other departments, legal aspects, ethics, and standards as they relate to procurement.

OPM 216 Traffic and Transportation Management I **3 Credits**

Prerequisites: None. Covers transportation systems, federal regulations, freight classifications, rates, tariffs, and claims.

OPM 224 Operations Management **3 Credits**

Prerequisites: MAT 112 - Functional Mathematics or MAT 111 - Intermediate Algebra. Studies the efficient production of goods and services that will satisfy the wants and needs of identified customer groups. Focuses on the acquisition of the factors of production, efficient use of those factors, and distribution of the output of the production process. Includes discussion of the need for quality and its measurement.

OTA 101 Foundations of Occupational Therapy **3 Credits**

Prerequisites: Admission to the OTA program. Establishes a philosophical base for subsequent course work by introducing and examining concepts basic to the study of occupational therapy assistant.

OTA 102 Kinesiology **2 Credits**

Prerequisites: None. **Corequisites:** OTA 101 - Foundations of Occupational Therapy and OTA 103 - Medical Conditions in Occupational Therapy. Examines principles of human movement including analysis of biomechanics, joint structure and function, and musculoskeletal function. Manual muscle testing and goniometric measurement are also covered.

OTA 103 Medical Conditions in Occupational Therapy **3 Credits**

Prerequisites: None. **Corequisites:** OTA 101 - Foundations of Occupational Therapy and OTA 102 - Kinesiology. Provides a basic understanding of physical conditions commonly referred to occupational therapy. Typical occupational therapy treatment plans and goals are discussed for selected conditions. The concept of wellness and holistic medicine also is introduced.

OTA 201 Field Work 1-A **1 Credit**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. **Corequisites:** OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, OTA 206 - Assistive Technology and Adaptive Equipment, and permission from program chair. Offered the first summer session after the general education is completed. Most of the general education has occurred and the student has a foundation for understanding normal human development. Allows the student to be in a clinical setting and to initiate observation and notewriting skills.

OTA 202 Therapeutic Activities **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102, Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. **Corequisites:** OTA 201 - Field work 1 - A, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Provides learning experiences in the following categories of therapeutic activities: crafts, sensory awareness, movement awareness, fine arts, construction, games, self-care, domestic, textiles, vocational, recreational, and educational. Emphasizes activity analysis and the individualization of activity selection.

OTA 203 Therapeutic Group Activities **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. **Corequisites:** OTA 202 - Therapeutic Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. Provides experiential learning in the analysis and therapeutic use of a variety of group activities used in occupational therapy. Analyzes selected activities in terms of occupational performance, human development, and adaptation to meet client needs.

OTA 204 Psychiatric Conditions in Occupational Therapy **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, and OTA 103 - Medical Conditions in Occupational Therapy. Reviews psychiatric disorders and the interdisciplinary approach to the conditions commonly referred to occupational therapy. Topics of discussion will include clinical team approach, legal issues, nomenclature, clinical description, and etiology of psychiatric disabilities.

OTA 205 COTA in Physical Health **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. **Corequisites:** OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, and OTA 206 - Assistive Technology and Adaptive Equipment. Presents assistant-level techniques for management of clinical physical dysfunction cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning and implementation, intervention, and prevention techniques as utilized by occupational therapy assistants in a variety of clinical settings and specific physical dysfunction diagnoses treated by occupational therapy.

OTA 206 Assistive Technology and Adaptive Equipment **2 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, and OTA 204 - Psychiatric Conditions in Occupational Therapy. **Corequisites:** OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, and OTA 205 - COTA in Physical Health. Provides supervised learning experience in the application of assistive technology in occupational therapy. Includes experiential learning in the analysis, selection, use, adjustment, adaptation, and/or fabrication of assistive technological devices.

OTA 207 Daily Living Skills **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 204 - Psychiatric Conditions in Occupational Therapy, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. **Corequisites:** OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork 1 - B, OTA 210 - COTA in Mental Health, and OTA 211 - Clinic Transition and Management. Provides the occupational therapy assistant student with supervised learning experiences in independent living skills which emphasize patient independence in personal mobility, self-care, communication, transportation, family living, work, and leisure skills. Addresses independent living skills in physical dysfunction, psycho-social dysfunction, and pediatrics.

OTA 208 COTA and Interactive Model **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - Psychiatric Conditions in Occupational Therapy, and OTA 206 - Assistive Technology and Adaptive Equipment. **Corequisites:** OTA 207 - Daily Living Skills, OTA 209 - Fieldwork 1 - B, OTA 210 - COTA in Mental Health, and OTA 211 - Clinical Transition and Management. Provides the occupational therapy assistant student with a basis from which to understand and provide therapeutic activities in a non-medical setting. Presents techniques for a variety of populations in settings such as schools, nursing homes, adult day care and sheltered workshops.

OTA 209 Field Work 1-B **1 Credit**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 205 - COTA in Physical Health, and OTA 206 - Assistive Technology and Adaptive Equipment. **Corequisites:** OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 210 - COTA in Mental Health, OTA 211 - Clinic Transition and Management, and permission from program chair. Provides for clinical observation and practice of the occupational therapy skills and processes presented in previous and current courses in the curriculum. Emphasizes interviewing/structured evaluation, treatment planning, implementation, and discharge. Requires weekly seminar attendance.

OTA 210 COTA in Mental Health **3 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medication Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 204 - Psychiatric Conditions in Occupational Therapy, and OTA 205 - COTA in Physical Health. **Corequisites:** OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork 1 - B, and OTA 211 - Clinical Transition and Management. Presents the psychiatric occupational therapy process and the role of the COTA with psychiatric cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning, and implementation of programs for patients/clients.

OTA 211 Clinical Transition and Management **4 Credits**

Prerequisites: OTA 101 - Foundations of Occupational Therapy, OTA 102 - Kinesiology, OTA 103 - Medical Conditions in Occupational Therapy, OTA 201 - Fieldwork 1 - A, OTA 202 - Therapeutic Activities, OTA 203 - Therapeutic Group Activities, OTA 204 - Psychiatric Conditions in Occupational Therapy, and OTA 205 - COTA in Physical Health. **Corequisites:** OTA 207 - Daily Living Skills, OTA 208 - COTA and Interactive Model, OTA 209 - Fieldwork 1 - B, and OTA 210 - COTA in Mental Health. Presents basic theory, techniques, and skills necessary for the transition into the clinical setting and for the management of an activities program. Presents management information as it relates to the role of the COTA along with an examination of the qualities necessary for success in the clinical setting.

OTA 212 Field Work 2-A **2 Credits**

Prerequisites: Successful completion of all didactic portions of program and permission from program chair. Provides an in-depth experience and opportunity to apply the knowledge, skills, and attitudes learned through the coursework of the Occupational Therapy Assistant program. Students deliver occupational therapy services to clients with a variety of ages and conditions and gain experience specific to the role and functions expected of an entry-level occupational therapy assistant.

OTA 213 Field Work 2 - B **2 Credits**

Prerequisites: Successful completion of all didactic portions of program and permission from program chair. *NOTE: To ensure continuity of application of academic concepts, all fieldwork should be completed within 18 months following completion of academic preparation. THERE ARE NO EXCEPTIONS TO THIS GUIDELINE. Provides an in-depth experience and opportunity to apply the knowledge, skills, and attitudes learned through the coursework of the Occupational Therapy Assistant program. Students deliver occupational therapy services to clients with a variety of ages and conditions, and gain experiences specific to the role and functions expected of an entry-level occupational therapy assistant.

PAR 102 Emergency Medical Technician - Basic Training **7.5 Credits**

Prerequisites: None. Prepares the student to apply for certification as an EMT in the state of Indiana based on the training program developed by the Department of Transportation and the Emergency Medical Services Commission of Indiana.

PAR 106 Pre-Hospital Environment **1.5 Credits**

Prerequisites: Certification as an EMT; course application and physical exam on file; twenty hours verified ambulance compartment time within the past year; CPR Certification American Heart Type C or Red Cross - Professional Rescuer; successful completion of written and practical entrance exams; positive evaluation by selection committee; proof of immunity to Rubella, Rubeola, and Hepatitis B; completion of Ivy Tech State College Asset exam. Introduces the legal, moral, and ethical responsibilities of the health care professional. Provides an overview of the emergency medical services system and its components and relationships. Introduces the essential principles of standard of care, medical liability, areas of potential medical liability, and medical liability protection. Provides awareness of concepts of rescue and preparation for response to a scene/incident. Provides an overview of stress, reactions to stress, anxiety, paramedic job stress, and dealing with death and dying. Medical terms and abbreviations are introduced.

PAR 113 Preparatory I **2.5 Credits**

Prerequisites: PAR 106 - Pre-Hospital Environment. Presents an overview of universal precautions and a review of anatomy and physiology. Introduces general patient assessment, initial management including scene survey, primary survey, resuscitation, secondary survey, history, definitive field management, and re-evaluation. Emphasizes employment of airway management including airway anatomy and physiology, assessment, management, ventilation, and suction.

PAR 114 Preparatory II **3.5 Credits**

Prerequisites: PAR 113 - Preparatory I. Covers the pathophysiology of shock, care of shock, and victim oxygenation. Introduces pharmacology, including drug information, action of drugs, weights and measures, and the administration and techniques of administering drugs.

PAR 202 Trauma **4 Credits**

Prerequisites: PAR 114 - Preparatory II. Overviews kinematics, primary survey, resuscitation, secondary survey and management, monitoring, and transporting trauma victims. Defines parameters and discusses anatomy and physiology as related to burn injuries, presents pathophysiology related to specific sources of burn injuries, and presents patient-related detail assessment and specific management of burns. Provides opportunities to practice and perform patient assessment, IV techniques and endotracheal incubation in emergency and operating rooms.

PAR 207 Medical **7.5 Credits**

Prerequisites: PAR 106 - Pre-Hospital Environment, PAR 113 - Preparatory I, PAR 114 - Preparatory II, and PAR 202 - Trauma. Reviews etiology and treatment of medical emergencies associated with the endocrine, nervous, and reproductive system. Teaches basic life support techniques including artificial ventilation, ventilation equipment, and oxygen therapy procedures. Stresses proficiency in cardiopulmonary resuscitation. Reviews bleeding control and shock management procedures. Covers in detail field infection control methods. Provides Ambulance Phase I students with a field internship which provides on the job experience in all phases of pre-hospital advanced life support.

PAR 208 Medical Emergencies **5 Credits**

Prerequisites: PAR 106 - Pre-Hospital Environment, PAR 113 - Preparatory I, PAR 114 - Preparatory II, PAR 202 - Trauma, and PAR 207 - Medical. Covers pathophysiology, respiratory management, and pharmacological interventions. Emphasizes dysrhythmia recognition relative to pre-hospital intervention. Provides opportunity for students to continue to practice and perform patient assessment, I.V. techniques, and endotracheal intubation in addition to administering medications and assisting in cardiac emergencies while rotating through the emergency room, intensive care unit, and coronary care units.

PAR 209 Age Emergencies **4.5 Credits**

Prerequisites: PAR 106 - Pre-Hospital, PAR 113 - Preparatory I, PAR 114 - Preparatory II, PAR 202 - Trauma, PAR 207 - Medical, and PAR 208 - Medical Emergencies. Environmental injuries and age specific considerations are emphasized during this course. Students participate in a field internship which provides on-the-job experience in all phases of pre-hospital advanced life support.

PAR 212 OB/GYN/Behavioral **5.5 Credits**

Prerequisites: PAR 209 - Age Emergencies. Discusses the etiology and treatment of gynecologic emergencies, the normal and abnormal events in pregnancy, and childbirth and the care of the neonate. Teaches advanced cardiac life support techniques. Requires students to rotate through the labor and delivery units and the emergency room. Discusses factors that may alter the emotional status of the ill or injured, communication techniques in managing an emotionally disturbed patient, removing bystanders from the scene, factors that increase the risk of suicide, and behavior modifications. Describes techniques useful in managing crisis situations, in dealing with EMT-Paramedic stress, in confronting an uncontrollable armed patient, and in restraining and transporting patients.

PAR 218 Ambulance Internship Phase III **6 Credits**

Prerequisites: PAR 106 - Pre-Hospital Environment, PAR 113 - Preparatory I, PAR 114 - Preparatory II, PAR 202 - Trauma, PAR 207 - Medical, PAR 208 - Medical Emergencies, PAR 209 - Age Emergencies, and PAR 212 - OB/GYN/Behavioral. Requires students to participate in a field internship which provides on the job experience in all phases of pre-hospital advanced life support as defined by the Indiana Emergency Medical Services Commission and the National Registry of Emergency Medical Technicians: patient assessment/management; ventilatory management; cardiac arrest skills (dynamic and static); intraveneous therapy; intravenous bolus medications; spinal immobilization (seated patient); bleeding, wounds, shock; long bone immobilization; traction splinting; spinal immobilization (lying patient). Requires completion of a minimum of 16 advanced life support runs taking approximately 284 hours.

PHO 104 Basic Photography **3 Credits**

Prerequisites: None. Covers basic black and white photographic theory and technique. Includes basic black and white darkroom processes and physics of light and filters. Studies cameras and lenses, characteristics of films and papers, and the chemistry of emulsions, exposure, and development.

PHO 106 Studio Practices **3 Credits**

Prerequisites: None. Introduces studio work in black and white photography using continuous light sources. Covers basic set-up techniques and lighting methods for a variety of subject matter. Includes practice with photo flood lamps and quartz lamps, both floods and spot, and a variety of equipment used to modify light.

PHO 107 Intermediate Photography **3 Credits**

Prerequisites: PHO 104 - Basic Photography. Develops advanced camera skills with medium and large format view cameras. Covers techniques for photographing in a variety of picture taking situations. Includes special darkroom techniques and processes. Emphasizes good composition and the use of photography as a communications tool.

PHO 109 Studio Lighting Techniques **3 Credits**

Prerequisites: PHO 106 - Studio Practices. Covers techniques for multiple lighting set-ups, studio electronic flash, location lighting, special effects, and large sets.

PHO 110 History of Photography **3 Credits**

Prerequisites: None. Surveys technological, aesthetic, social, and political changes that the medium of photography has undergone. Studies and recreates nineteenth century processes. Includes visits to historical archives to view prints.

PHO 201 Principles of Color Photography **3 Credits**

Prerequisites: PHO 104 - Basic Photography. Develops camera and laboratory skills needed for color negative and color positive processes through work with state-of-the-art equipment and techniques. Encompasses color psychology and aesthetics as well as the physics and chemistry of color photography.

PHO 202 Advanced Process and Techniques **3 Credits**

Prerequisites: PHO 201 - Principles of Color Photography. Covers specialized techniques used by commercial photography labs such as masking internegatives, use of print film, litho film, production techniques, and retouching.

PHO 203 Professional Portraiture **3 Credits**

Prerequisites: PHO 107 - Intermediate Photography and PHO 201 - Principles of Color Photography. Explores approaches and methods in traditional and alternative portraiture in studio and on-location photography. Emphasizes creative approaches to commercial portraiture.

PHO 204 Commercial Photography Techniques I **3 Credits**

Prerequisites: PHO 107 - Intermediate Photography and PHO 201 - Principles of Color Photography. Introduces studio and lab techniques used in advertising and industrial photography. Emphasizes creative problem solving and business communications.

PHO 205 Commercial Photography Techniques II **3 Credits**

Prerequisites: PHO 204 - Commercial Photography Techniques I. Explores special techniques used in advertising and industrial photography such as those used in on-location product photos, products with models, food illustrations, and multi-image slide presentations.

PHO 206 Special Projects I **3 Credits**

Prerequisites: All courses from previous semesters' course work to semester in which special projects occur. Accommodates students' interests in specific areas of their fields or in areas where there is a need to strengthen skills. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of design, production, and/or illustration.

PHO 207 Special Projects II **3 Credits**

Prerequisites: PHO 206 - Special Projects I and PHO 208 - Independent Study I. Provides specific experiences in selected areas. Requires instructor approval prior to project work.

PHO 208 Independent Study I **3 Credits**

Prerequisites: All second semester technical courses. Provides students with opportunities to design a project for specific areas. Requires students to develop a plan to show what the project outcomes/results will be. Restricts work to the program area and must be portfolio quality.

PHO 209 Independent Study II **3 Credits**

Prerequisites: First three semesters. Provides students with the opportunity to develop skills in specific areas of a visual communications program or to elect a course from the College curriculum which supports a career in their chosen program. Requires program chairperson approval to elect non-program course work. Requires instructor approval for program projects.

PHO 214 Journalistic and Editorial Photography **3 Credits**

Prerequisites: PHO 107 - Intermediate Photography. Gives students the opportunity to photograph events and human interest features to gain experience in contributions to various publications. Emphasizes establishing visual relationships in the photo essay.

PHO 215 Advanced Portraiture **3 Credits**

Prerequisites: PHO 203 - Professional Portraiture. Further exploration of advanced approaches to portraiture. Emphasis is on creativity and quality.

PHO 216 Advanced Processes and Production Techniques **3 Credits**

Prerequisites: None. Introduces specialized lab techniques in traditional and digital formats. Works with contemporary experimental darkroom techniques. Covers issues in prepress production as they relate to the photographer. Teaches halftone and color separation techniques as well as the use of typography with photographs.

PHO 217 Fashion Photography **3 Credits**

Prerequisites: PHO 109 - Studio Lighting Techniques. Introduces the field of fashion photography with emphasis on commercial application.

PHO 218 Fine Art Photography **3 Credits**

Prerequisites: None. Examines current issues in non-commercial photography. Explores attitudes of photographers and critics on a wide range of topics through directed reading, class discussion, and gallery visits.

PHO 220 Sensitometry **3 Credits**

Prerequisites: PHO 104 - Basic Photography. Estimates response of photographic materials to radiant energy, including methods of exposing, processing, measurement, and data evaluation.

PHO 222 Electronic Photography **3 Credits**

Prerequisites: None. Examines the area of still video photography and various electronic darkroom software packages. Includes editing processes, manipulating images in black-and-white and color, and working with various output devices.

PMT 101 Introduction to Plastics **3 Credits**

Prerequisites: None. Introduces plastic processing industries, techniques, and commonly used polymers.

PMT 106 Introduction to Polymer Science **3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Introduces structure, properties, and processing characteristics of plastic polymers and additives.

PMT 107 Injection Molding **3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Expands student knowledge of the injection molding process, components, and industry.

PMT 108 Extrusion Processes **3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics. Introduces the extrusion process, equipment, and industrial applications.

PMT 201 Advanced Injection Molding **3 Credits**

Prerequisites: PMT 107 - Injection Molding. Covers the procedures and techniques necessary to fully utilize the capabilities of modern injection molding equipment to properly process thermoplastic materials.

PMT 202 Advanced Extrusion **3 Credits**

Prerequisites: PMT 108 - Extrusion Processes. Covers the procedures and techniques necessary to fully utilize the capabilities of modern extrusion equipment to properly process thermoplastic materials.

PMT 206 Plastics Material Testing **3 Credits**

Prerequisites: PMT 106 - Introduction to Polymer Science. Covers state-of-the-art chemical, physical, and mechanical testing. Includes ASTM, UL, SAE and other agency criteria now used in engineering design databases.

PMT 208 Computer Applications in Plastics **3 Credits**

Prerequisites: PMT 107 - Injection Molding, PMT 108 - Extrusion Processes. Introduces the computer products and services available to aid in the design and manufacturing of plastic products.

PMT 209 Manufacturing of Plastics Products **3 Credits**

Prerequisites: PMT 101 - Introduction to Plastics, PMT 107 - Injection Molding, PMT 108 - Extrusion Processes. Discusses the economic, organizational, and quality control strategies employed for efficient production of plastics. Introduces the major secondary finishing, decorating, and joining techniques. Develops an understanding of the practical considerations of manufacturing operations.

PNU 114 Nursing Issues and Trends **1 Credit**

Prerequisites: Admission into the PN program. Focuses on nursing history, ethical and legal issues. Examines the organizational patterns and roles of the practical nurse in the health care delivery system. Emphasizes life-long learning.

PNU 121 Introduction to Nursing I **4 Credits**

Prerequisites: Admission to PN program. Corequisites: ANP 101 - Anatomy and Physiology I and ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science. Introduces the role of the practical nurse as a member of the health care team. The nursing process is the basis for providing care within the wellness/illness continuum. Focuses on the application of basic nursing skills essential in meeting biological, psychosocial, cultural, and spiritual needs of individuals in preventive, therapeutic, and rehabilitative environments.

PNU 122 Introduction to Nursing II **6 Credits**

Prerequisites: PNU 121 - Introduction to Nursing I. Focuses on the progression of learning nursing skills. Emphasizes application of safe nursing practice in the clinical setting. Introduces drug administration, dosage calculations, and mental health concepts.

PNU 123 Pharmacology **3 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II. Corequisites: PNU 126 - Integrated Life Science. Studies pharmacological agents, including classifications, actions, side effects, interactions, and nursing implications.

PNU 126 Integrated Life Science **5 Credits**

Prerequisites: Successful completion of ASSET and/or basic skills. Approval of program chair. Examines physical/chemical factors that enable man to maintain homeostasis of the internal environment. Emphasizes anatomy and physiology. Integrates concepts of chemistry, nutrition, and microbiology.

PNU 127 Care of the Adult **5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II. Corequisites: PNU 126 - Integrated Life Science. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with circulatory, ventilation, and immunity dysfunctions. Emphasizes meeting biological, psychosocial, cultural, and spiritual needs in selected environments. Theory is applied in clinical component.

PNU 128 Care of the Adult **5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and ANP 102 - Anatomy and Physiology II. Corequisites: PNU 126 - Integrated Life Science. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with nutrition, elimination, reproduction, and hormone dysfunctions. Emphasis will be on meeting biological, psychosocial, cultural, and spiritual needs in selected environments. Theory is applied in clinical component.

PNU 129 Care of the Adult **5 Credits**

Prerequisites: PNU 122 - Introduction to Nursing II and PNU 126 - Integrated Life Science. Corequisites: ANP 102 - Anatomy and Physiology II. Focuses on the application of the nursing process in understanding the pathophysiology and nursing care of clients with mobility, neurological, sensory, and dermatological dysfunctions. Emphasis will be on meeting biological, psychosocial, cultural, and spiritual needs in selected environments. Theory is applied in clinical component.

PNU 130 Nursing Care of the Older Adult **5 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science, and PNU 122 - Introduction to Nursing II. Focuses on the application of the nursing process in meeting biological, psychosocial, cultural, and spiritual needs of older clients in selected environments. Preventive, therapeutic, rehabilitative care, and in support of death with dignity are major components. Theory is applied in the clinical setting.

PNU 131 Nursing Care of the Childbearing Family **6 Credits**

Prerequisites: ANP 102 - Anatomy and Physiology II or PNU 126 - Integrated Life Science, and PNU 122 - Introduction to Nursing II. Emphasis is on the normal reproductive cycle and normal growth and development of the child within the wellness/illness continuum. Examines conditions and selected interventions based on the nursing process, in providing preventive, therapeutic, and rehabilitative care for the mother and child. The role of the practical nurse is identified in providing holistic care to the childbearing family within the clinical setting.

PNU 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. The student will work at a job site that is specifically related to his/her career objectives. This course is designed to provide on-the-job experience while earning credit toward an associate degree.

PST 120 First Responder **3 Credits**

Prerequisites: None. Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies, and apply appropriate first aid. Addresses handling of victims of hazardous materials accidents. Covers CPR, including one and two rescuer, and adult, infant, and child resuscitation.

PST 121 Risk Management **3 Credits**

Prerequisites: None. Introduces occupational safety and health standards and codes with emphasis on applications of codes to typical work situations and MSDS requirements. Includes emergency first aid, safety protection, eye protection, and chemicals handling. Covers employer and employee rights as well as violations, citations, penalties, variances, appeals, and record keeping.

PST 220 Incident Management Systems **3 Credits**

Prerequisites: None. Emphasizes the command and control of major department operations at an advanced level, linking operations and safety. Areas of study include incident management systems, pre-incident, size-up, command systems, sectoring functions, staging, safety officer, command post, communications, news media, and computer aided resources. Utilizes simulated incidents requiring the applications of appropriate solutions.

PST 221 Computer Design and Planning **3 Credits**

Prerequisites: TEC 104 - Computer Fundamentals for Technology. Focuses on the needs and uses of the computer in public safety. Includes computer-aided dispatch, advanced levels of cameo, I-Chiefs, computer-aided design of equipment, generation of incident reports, application of computers for the budgetary process, computer-aided resource and materials, maintenance, test records of vehicles, and the GIS program.

PST 222 Industrial Loss Prevention **3 Credits**

Prerequisites: None. Provides the student with a comprehensive study of the Code of Federal Regulations 29-1910. Covers the General Industry Standards Subparts A to Subparts R. Includes the responsibility of a safety department within industry and the emphasis placed on the Code of Federal Regulations. Emphasizes the need for proper record keeping and reporting to the Indiana Occupational Safety and Health Administration. Focuses on safety and the steps needed to administer a quality program.

PST 281-293 Special Topics in Public Safety **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

PTA 101 Introduction to Physical Therapist Assisting **3 Credits**

Prerequisites: None. Explores the history and concepts of physical therapy, physical therapist assisting, and rehabilitative medicine. Introduces fundamentals of patient care including universal precautions; body substance isolation; OSHA guidelines; patient assessment including vital signs; emergency procedures including CPR; body mechanics; and patient handling with applications of physics principles. Includes preparation of patients, treatment areas, and equipment.

PTA 102 Diseases, Trauma, and Terminology **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I and ANP 102 - Anatomy and Physiology II. Explores diseases and trauma which necessitate physical therapy for the client. Medical terminology, anatomy, physiology, psychology, disabilities, and physics related to these conditions are discussed along with instrumentation, implants and fixation devices. Provides students with the opportunity to explore their own reactions to illness and disability and to discuss how to recognize patients' and families' reactions to illness and disability.

PTA 103 Administrative Aspects of Physical Therapist Assisting **2 Credits**

Prerequisites: None. Addresses the legal and ethical aspects of physical therapist assisting and patient care along with charting, documentation, report writing, patient history procurement, record keeping, charges, insurance information including diagnostic and procedure coding, third party reimbursement, Medicare, Medicaid, electronic claims and patient rights including American Disabilities Act policy and architectural barriers identification. Discusses current issues in health care provision. Explores patient, family, and professional communication techniques, body language and electronic communication as well as techniques in patient teaching. Includes performing within the limitations of scope of skills, basic principles of levels of authority and responsibility, planning, time management, supervisory process, performance evaluations, policies, and procedures.

PTA 106 PTA Treatment Modalities I **5 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, PTA 102 - Diseases, Trauma, and Terminology, and PTA 103 - Administrative Aspects of Physical Therapist Assisting. Continues concentration on the fundamentals of patient care including universal precautions, assessment of vital signs, CPR, body mechanics, and patient positioning. Includes lectures, demonstrations and simulated patient problems in the laboratory portion of the course. Studies new techniques in depth, such as gait training, gait device selection, goniometry range of motion exercises, and measuring. Introduces various modalities including hydrotherapy, thermo-therapy, massage, traction, and intermittent compression techniques. Safety factors are emphasized in both the lectures and the laboratories. The laboratory provides the setting for the practice and implementation of theories and techniques of PTA 106. Students practice assessments and treatment methods on themselves and one another under the guidance and supervision of the laboratory instructor.

PTA 107 Kinesiology **5 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, ANP 101 - Anatomy and Physiology I, ANP 102 - Anatomy and Physiology II, and SCI 111 - Physical Science. Introduces the physical therapist assistant student to the science of kinesiology. By definition, kinesiology is the study of movement. Studies human movement and brings together the fields of anatomy, physiology, physics, and geometry. Prerequisite knowledge of skeletal and muscular anatomy and physiology is necessary. Class will consist of equal parts of lectures, demonstration, and student participation in locating, observing, and palpating various boney prominences and musculatures. Much of kinesiology requires independent study to memorize origin, insertion, action, and innervation of all muscles. The knowledge gained in this course is an integral part of the students' background preparation for the practice of physical therapy.

PTA 115 Clinical I **2 Credits**

Prerequisites: PTA 101 - Introduction to Physical Therapist Assisting, PTA 102 - Diseases, Trauma, and Terminology, PTA 103 - Administrative Aspects of Physical Therapist Assisting, and PTA 106 - PTA Treatment Modalities I. Requires the student to perform in a clinical environment with patients, using applications of theory and techniques of PTA 106, under the guidance of a registered physical therapist.

PTA 205 Clinical II **5 Credits**

Prerequisites: PTA 106 - PTA Treatment Modalities I, PTA 107 - Kinesiology, and PTA 207 - PTA Treatment Modalities II. Requires the student to perform in a clinical environment with patients using applications of theories and techniques of PTA 207 under the guidance of a registered physical therapist.

PTA 207 PTA Treatment Modalities II **5 Credits**

Prerequisites: PTA 106 - Treatment Modalities I and PTA 107 - Kinesiology. Reviews joint structure, muscle origins, insertions, innervations, actions, and physiology. Covers normal and abnormal gait, orthotics and prostheses, arthritis and joint replacement, and postural correcting exercise along with treatment principles and therapeutic exercises for the neck, back, and peripheral joints. Discusses general exercise principles and progression of the orthopedic patient through an exercise program. Addresses appropriate applications of principles of physics and kinesiology.

PTA 215 Clinical III **5 Credits**

Prerequisites: Completion of PTA 207 - PTA Treatment Modalities II, and PTA 106 - PTA Treatment Modalities I. Requires the student to perform in a clinical environment with patients using applications of theory and techniques of PTA 217 under the guidance of a registered physical therapist.

PTA 217 PTA Treatment Modalities III **5 Credits**

Prerequisites: PTA 106 - PTA Treatment Modalities I and PTA 207 - PTA Treatment Modalities II. Provides an in-depth approach to therapeutic exercise as performed by the physical therapy assistant. Covers basic anatomy and physiology of the central and peripheral nervous systems and activities of daily living. Includes exercise physiology and neurophysiology and advanced principles and procedures of therapeutic exercise appropriate for cardiopulmonary, cardiovascular, orthopedic and neurologic conditions, stroke, spinal cord, and peripheral nerve injuries. Discusses prevention measures, specialized techniques, and the utilization of specialized therapeutic equipment and correlates them to exercise applications. Addresses appropriate applications of kinesiology and principles of physics. Provides practice and implementation of theories and techniques of PTA 106 and PTA 207 in the lab setting.

PTA 224 Current Issues and Review **1 Credit**

Prerequisites: PTA 205 - Clinical II and PTA 215 - Clinical III. Teaches the sources of physical therapy research and discusses the recognition of the roles and responsibilities of physical therapy assistants. Requires completion and presentation of an independent project. Includes a comprehensive review of the course to prepare the student for licensure exam.

PTA 240 Independent Study **1 Credit**

Prerequisites: PTA 207 - PTA Treatment Modalities II and PTA 217 - PTA Treatment Modalities III. Introduces a case study assigned by the student's clinical instructor. The case study is followed for five weeks during which the following are monitored: patient evaluation, plan of treatment, patient progress, changes in treatment plan, discharge summary, related research and data collection, and a written summary of the patient's prognosis based on the criteria above.

QSC 101 Quality Control Concepts and Techniques I **3 Credits**

Prerequisites: None. Covers current quality control concepts and techniques in industry with emphasis on modern manufacturing requirements.

QSC 102 Statistical Process Control **3 Credits**

Prerequisites: None. Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of statistical process control to ensure that prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms, and attribute and variable charts.

QSC 201 Advanced Statistical Process Control **3 Credits**

Prerequisites: QSC 102 - Statistical Process Control. Builds on the basic principles of QSC 102 with advanced techniques by industry to ensure economic production of goods based on defect prevention rather than defect detection. Covers the various decisions to modify, change, or adjust processes based on statistical evidence. Stresses interpretation of statistical data and distinguishing between common and special causes of problems. Emphasizes appropriate use of control charts, trend analysis, assessing process and machine capability, evaluating the measurement process, using computers, and automated data collection systems and implementation techniques.

QSC 202 Quality Control Concepts and Techniques II **3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 102 - Statistical Process Control, MAT 115 - Statistics or advisor approval. Acquaints students with quality control systems. Emphasizes the systems approach to quality, establishing the quality system, and applying total quality control in the company.

QSC 203 Metrology **3 Credits**

Prerequisites: None. Covers techniques of linear and angular measurement and applications for industrial processes and quality control.

QSC 204 Total Quality Management **3 Credits**

Prerequisites: None. Teaches the philosophy of total quality management. Focuses on improving processes and reducing variation in systems. Covers management's role in improving aspects of manufacturing and service organizations to achieve quality improvement.

QSC 210 Quality Management Principles **3 Credits**

Prerequisites: None. Stresses the management concept relating to employee attitudes, motivation, and job satisfaction, as well as philosophies, styles of leadership, and team building as they relate to quality objectives.

QSC 281-293 Special Topics in Quality Science **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

RAD 101 Orientation and Nursing in X-Ray Technology **4 Credits**

Prerequisites: Acceptance into the program through appropriate assessment or successful completion of college entry courses. Covers seven units. Introduces radiology and prepares students for entry into a clinical setting.

RAD 102 Principles of Radiographic Exposures I **2 Credits**

Prerequisites: RAD 107 - Radiation Physics. Presents individual and group characteristics needed to produce the ideal radiograph. Includes knowledge of interchangeability of mAs, kVp, film/screen combinations, distance, and grids. Covers factors and considerations needed for pediatric techniques, calibration, heat unit calculation, and technique chart construction.

RAD 103 Radiographic Positioning I **3 Credits**

Prerequisites: Acceptance into program through appropriate assessment or successful completion of pre-college courses, CIS 101 - Introduction to Microcomputers, and any other previous radiography courses. Correlates positioning, terminology, techniques, and film critique with the examinations of chest, abdomen, upper extremity, upper/lower GI tracts, and urinary tract.

RAD 104 X-Ray Clinical Education I **4 Credits**

Prerequisites: Concurrent enrollment with RAD 103 - Radiographic Positioning I, completion of CIS 101 and other applicable courses. Follows category 2 of the competency lab model, which tests proficiency of skills from categories 1 and 2. Includes supervised clinical experience.

RAD 105 Radiographic Positioning II **3 Credits**

Prerequisites: Successful completion of RAD 103 - Radiographic Positioning I, RAD 104 - X-Ray Clinical Education I, and any other previous radiology course. Correlates all previous material related to anatomy and positioning, covers the areas of lower extremities, spine and thorax, and advances knowledge in ethics and quality assurance.

RAD 106 X-Ray Clinical Education II **4 Credits**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 104 - X-Ray Clinical Education I, Concurrent with RAD 105 - Radiographic Positioning II, and all previous required radiology courses. Includes supervised clinical experience, utilizes Category 2 of the competency model, and tests proficiency of skills from Categories 1 and 2.

RAD 107 Radiation Physics **3 Credits**

Prerequisites: MAT 111 - Intermediate Algebra. Introduces physics as utilized in the production of X-rays. Includes laws of physics pertaining to atomic structure, chemical properties and reactions, and electrical circuitry. Covers equipment and methods of generation and measurement of electricity.

RAD 108 Radiographic Quality Assurance **2 Credits**

Prerequisites: None. Presents theories and practices pertaining to the establishment of department exposure standards. Includes equipment tests for reliability, problem solving, reject analysis, and cost containment. Provides hands-on experience in processor monitoring, record keeping, and radiographic quality control tests.

RAD 109 Imaging Techniques **2 Credits**

Prerequisites: Successful completion of any other previous radiology courses. Covers theories, principles, and demonstrations of current imaging modalities.

RAD 201 Radiographic Positioning III **2 Credits**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 105 - Radiographic Positioning II, and all other previous radiology courses. This course correlates positioning terminology and techniques, film critique, with exams of Category 2 of the competency models and testing skills from Category 1 and 2.

RAD 202 X-Ray Clinical Education III **4 Credits**

Prerequisites: RAD 103 - Radiographic Positioning I, RAD 105 - Radiographic Positioning II, RAD 106 - X-Ray Clinical Education II, Concurrent with RAD 201 - Radiographic Positioning III, and all other previous program courses. Introduces Category 3 of the Competency Model, proficiency testing over Categories 1 and 2 and testing over Category 3.

RAD 203 X-Ray Clinical Education IV **4 Credits**

Prerequisites: RAD 202 - X-Ray Clinical Education III, RAD 201 - Radiographic Positioning III, RAD 106 - X-Ray Clinical Education II, RAD 105 - Radiographic Positioning II, RAD 103 - Radiographic Positioning I, and concurrent with RAD 209 - Radiographic Positioning IV. Introduces Category 4 of the Competency Model in lab proficiency testing of skills from Categories 1, 2, 3 and proficiency in Category 4.

RAD 204 X-Ray Clinical Education V **4 Credits**

Prerequisites: RAD 203 - X-Ray Clinical Education IV, RAD 201 - Radiographic Positioning III, RAD 106 - X-Ray Clinical Education II, RAD 105 - Radiographic Positioning II, and RAD 103 - Radiographic Positioning I. Includes final competency testing for students who have not completed clinicals 1-4. Continues maintenance over all categories. Includes clinical experience.

RAD 205 Pathology for Radiologic Technology **2 Credits**

Prerequisites: Successful completion of previous radiology courses. Examines basic concepts concerning disease, its causes and the resulting changes as viewed radiographically. Emphasizes needed technical changes to produce optimal radiographs from correlations to patient symptoms.

RAD 206 Radiobiology and Radiation Protection **3 Credits**

Prerequisites: Successful completion of previous radiology courses. Covers theories and principles of the effects of ionizing radiation upon living tissues. Includes dosages, measurements, DNA structure, and function and cellular radio sensitivity.

RAD 208 Principles of Radiographic Exposures II **2 Credits**

Prerequisites: RAD 102 - Principles of Radiographic Exposures I. Continues RAD 102 - Principles of Radiographic Exposure I. Explains photo timing and its relationship to manual techniques. Associates kVp and mAs with the quality and quantity of radiation. Covers standard darkroom procedure, automatic processing, and quality assurance.

RAD 209 Radiographic Positioning IV **3 Credits**

Prerequisites: RAD 201 - Radiographic Positioning III and all other previous radiology courses. Covers all positions involving radiographic examinations.

RAD 288 Pharmacology and Routes of Administration for Radiologic Technologists **3 Credits**

Prerequisites: Successful completion of previous radiology courses. Surveys common pharmacologic agents, including emergency drugs, contrast media, measurements, dosages, actions, contraindications, indications, allergic reactions, and routes of administration.

RAD 299 General Examination Review **3 Credits**

Prerequisites: None. Reviews content of program, emphasizing anatomy, physics, exposure principles, positioning, and radiation safety. Simulated exams prepare the student for the American Registry of Radiologic Technologist Examination.

RES 121 Introduction to Respiratory Care **6 Credits**

Prerequisites: Program Chair approval; demonstrated competency in reading, writing, computation, and basic science skills through appropriate assessment or successful completion of BSA program coursework. Corequisites: RES 122 - Therapeutic Modalities. Presents an introduction to respiratory care including a brief history of the profession; equipment cleaning and sterilization techniques; patient assessment techniques and isolation techniques. Includes medical records documentation, gas analyzers, introduction and application of therapeutic modalities including oxygen therapy, aerosol and humidity therapy, airway maintenance, hyperinflation therapy, and an overview of ethical practice and safety.

RES 122 Therapeutic Modalities **3 Credits**

Prerequisites: Program Chair approval; demonstrated competency in reading, writing, computation, and basic science skills through appropriate assessment or successful completion of BSA program coursework. Presents medicinal aerosol therapy and respiratory pharmacology; hyperinflation therapies; introduction to pulmonary rehabilitation and home care. Introduces basic bedside pulmonary function testing and development of respiratory care plans. Presents selected aspects of ethical and legal respiratory practice.

RES 123 Cardiopulmonary Physiology **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I. Corequisites: ANP 102 - Anatomy and Physiology II. Presents the cardiopulmonary system including ventilation, perfusion and gas exchange; introduces interpretation and application of arterial blood gases, acid-base regulation, and physiologic monitoring.

RES 124 Clinical Practicum I **3 Credits**

Prerequisites: CPR Certification - Course C AHA, Health Care Provider (HCP) Level. Corequisites: RES 121 - Introduction to Respiratory Care. Introduces the student to the hospital environment. Exposes the student to various hospitals and respiratory care departments, patient charts, patient identification, and communication within the hospital. Provides supervised experience in oxygen therapy, hyperinflation therapy, humidity/aerosol therapy, and charting.

RES 125 Critical Care I **3 Credits**

Prerequisites: RES 122 - Therapeutic Modalities. Introduction to the respiratory care of the critically ill patient. Presents arterial blood gas collection; analysis and interpretation; and basic medical laboratory data. Introduces concepts and techniques of critical respiratory care of adults and pediatrics; includes establishment and maintenance of artificial airways, application of adult and pediatric mechanical ventilators, and related cardio-pulmonary monitoring equipment.

RES 126 Clinical Medicine I **3 Credits**

Prerequisites: RES 123 - Cardiopulmonary Physiology. Introduces etiology, symptomatology, diagnosis, therapeutics, and prognosis of selected pulmonary diseases.

RES 127 Clinical Practicum II **3 Credits**

Prerequisites: RES 121 - Introduction to Respiratory Care, CPR - Certification Course C, and RES 124 - Clinical Practicum I. Provides supervised experience in selected therapeutic modalities. Includes an introduction to chest physiotherapy, medicinal aerosol therapy, intermittent positive pressure breathing, and ultrasonic therapy. Requires continuing certification in CPR.

RES 128 Clinical Practicum III **9 Credits**

Prerequisites: RES 125 - Critical Care I, CPR Certification - HCP Level, RES 126 - Clinical Medicine I, RES 127 - Clinical Practicum II. Provides additional supervised experience in selected therapeutic modalities. Includes advanced patient assessment, arterial blood gas analysis, and airway care. Provides clinical experience in adult critical care with mechanical ventilation. Includes an introduction to basic cardiopulmonary testing. Requires continued Certification in CPR.

RES 221 Cardiopulmonary Diagnostics **3 Credits**

Prerequisites: RES 125 - Critical Care I and RES 126 - Clinical Medicine I. Presents in-depth approaches to the respiratory care management of critically ill neonatal, pediatric, and adult patients. Emphasizes techniques of patient evaluation, cardiopulmonary monitoring, transportation, and management. Includes advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.

RES 222 Critical Care II **3 Credits**

Prerequisites: RES 125 - Critical Care I and RES 126 - Clinical Medicine I. Presents advanced techniques of mechanical ventilation of neonatal, pediatric and adult patients; includes fetal development and assessment; neonatal and pediatric assessment, equipment, procedures and therapeutic techniques; and introduces related aspects of the NICU environment.

RES 223 Respiratory Pharmacology **3 Credits**

Prerequisites: ANP 101 - Anatomy and Physiology I and ANP 102 - Anatomy and Physiology II. Discusses the most common pharmacological agents currently being administered to all body systems. Emphasizes classifications, indications, side effects, dosages and routes of administration. Discusses emergency drugs, antibacterial medication, antifungal medications, and the implications and complications of IV therapy.

RES 224 Clinical Medicine II **3 Credits**

Prerequisites: RES 221 - Cardiopulmonary Diagnostics. Presents etiology, symptomatology, diagnosis, therapeutics and prognosis of disease conditions related to respiratory care; focuses on the interrelation of all physiologic systems. Emphasizes treatment protocols and includes preparation for clinical simulation component of national credentialing examination.

RES 225 Emergency Management **1 Credit**

Prerequisites: CPR Certification - HPC Level. Applies advanced cardiopulmonary life support efforts in an emergency setting.

RES 226 Continuing Care **2 Credits**

Corequisites: RES 227 - Clinical Practicum IV. Presents a brief history of home care patients in relation to respiratory care modalities. Provides an overview of respiratory care roles in the alternative care sites.

RES 227 Clinical Practicum IV **6 Credits**

Prerequisites: CPR Certification - Course C and RES 128 - Clinical Practicum III. Provides additional supervised experience in selected therapeutic modalities. Includes advanced cardiopulmonary diagnostic techniques, application of invasive and non-invasive monitoring of the cardiopulmonary system, and experience in respiratory care, departmental management, and quality assurance roles. Includes advanced clinical experience in adult, pediatric, and neonatal critical care. Requires continuing certification in CPR.

RES 228 Information Systems for Health Care **1 Credit**

Prerequisites: Program Chair approval. Presents an introduction to computer technology and its uses in the health care setting.

RVT 101 Introduction to RV Service/Customer Relations **2 Credits**

Prerequisites: None. Covers the use of basic hand tools and equipment used in the repair of recreational vehicles. Discusses service and safety practices, technician liability, applicable laws, service documentation and manuals. Examines RV classifications, industrial codes and standards. Covers techniques, insights and pertinent knowledge needed to foster positive relationships with customers, as well as situations and remedies for dealing with dissatisfied customers.

RVT 102 Electrical Concepts **3 Credits**

Prerequisites: None. Acquaints students with fundamentals of AC/DC electricity and circuitry related to troubleshooting and repair of recreational vehicles. Studies the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

RVT 103 Fluid Power, Heat and Mechanical Systems **4 Credits**

Prerequisites: None. Provides an overview of pneumatic and hydraulic power generation, controls, and actuation devices found in recreational vehicles. Includes an introduction of the basic principles of gears, levers, pulleys, and their application to simple machines. Studies the effects and application of heat on solids, liquids, and gases.

RVT 104 LP Gas **2 Credits**

Prerequisites: None. Addresses LP gas fundamentals, properties and safety as used in troubleshooting and repair of RV systems within industry and governmental codes and standards. Encompasses the use of test equipment and identification of component symbols and applies them to actual RV systems and appliances.

RVT 105 RV Electrical Systems Service **5 Credits**

Prerequisites: RVT 102 - Electrical Concepts. Provides necessary skills and knowledge to troubleshoot, repair, and/or replace AC/DC circuitry, components, and auxiliary systems in recreational vehicles.

RVT 106 RV Braking, Suspension, and Towing Systems **3 Credits**

Prerequisites: None. Covers the operation, troubleshooting, repair and/or replacement of electric brakes, suspension, and towing systems in all types of recreational vehicles. Studies actual RV systems and appliances. Includes appropriate mathematical formulae.

RVT 107 RV Air Conditioning and Absorption Refrigeration Service **4 Credits**

Prerequisites: None. Acquaints students with absorption refrigeration principles, troubleshooting, and repair utilizing actual RV systems and appliances. Studies inspection, maintenance, and replacement techniques.

RVT 108 Heating Systems/Accessory Installation and Service **3 Credits**

Prerequisites: None. Covers theory of operation, diagnosis, and troubleshooting of heating systems and accessories.

RVT 109 Water Systems and Water Heating **2 Credits**

Prerequisites: None. Covers theory of operation, diagnosis, and troubleshooting of water systems and water heaters.

RVT 110 Interior Coach **3 Credits**

Prerequisites: None. Deals with installation, troubleshooting, repair, and/or replacement of interior cabinetry, furniture, hardware, paneling, ceilings, flooring, floor coverings, upholstery, soft goods, doors, and other interior components. Demonstrate and applies basic skills related to working with wood, plastics, and fabrics.

RVT 111 Exterior Coach **4 Credits**

Prerequisites: None. Details structural characteristics of various types of recreational vehicles. Provides skills and knowledge necessary to repair, recover, and reseal exterior sidewalls and roofs. Demonstrate and applies techniques for locating and repairing water and air leaks, windows, basic body repair, touch-up, and painting.

RVT 112 Pre-Delivery and Preventive Maintenance **2 Credits**

Prerequisites: None. Provides techniques and procedures to ensure proper pre-delivery preparation for new units. Covers inspection, periodic checks and adjustments, and fluid, filter and belt replacements. Utilizes actual vehicles and components.

RVT 201 Metal Processing and Metallurgy **2 Credits**

Prerequisites: None. Covers applications of welding and the study of metals utilized in the RV service industry. Discusses and applies the use of sheet metal tools, layout, cutting, forming, and fastening.

RVT 205 RV Internship **6 Credits**

Prerequisites: None. Provides in-shop, hands-on study within the RV service community. Requires students to perform all phases of RV service and repair under the supervision of a qualified technician or service manager.

RVT 280 Co-op/Internship **1-6 Credits**

Prerequisites: Provides the opportunity to work at a job site specifically related to a student's career objectives. Provides on-the-job experience while earning credit toward an associate degree.

SPC 103 Employee Participation Techniques and Quality Improvements **3 Credits**

Prerequisites: None. Provides an overview of the development of an employee involvement program such as quality circles, teams, groups, and other concepts. Includes problem-solving techniques of brainstorming, cause and effect diagrams, data gathering, check sheets, Pareto analysis, central location, frequency distribution, and histograms. Covers the role of management and employees in the process and their relationship to participative management.

SPC 104 Introduction to Non-Destructive Testing **2 Credits**

Prerequisites: None. Acquaints students with the principles and various types of non-destructive examination methods, their advantages, limitations, and applications.

SPC 105 Non-Destructive Testing Applications I **3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I. Presents an overview of the relationship of non-destructive testing to the total quality function. Includes advantages and limitations of various test methods.

SPC 106 Non-Destructive Testing Applications II **3 Credits**

Prerequisites: SPC 105 - Non-Destructive Testing Applications I. Covers theoretical and practical aspects of non-destructive testing in radiography, eddy current testing, acoustic emission, and leak testing.

SPC 108 Quality Control Engineering Principles and Technologies **3 Credits**

Prerequisites: Advisor approval. Presents principles and techniques of modern quality control engineering with attention to management, engineering, economic, and production factors. Emphasizes the assurance of quality at the hardware, processing, and system levels.

SPC 109 Engineering Materials **3 Credits**

Prerequisites: Advisor approval. Includes the basic principles of metallurgy and the properties of materials in the section of parts and manufacturing processes. Explores the ways in which the strength and hardness of metals can be altered by heating and cooling. Examines ceramics, composites, polymers, and other exotic metals.

SPC 110 Quality Control Engineering Theory and Application **3 Credits**

Prerequisites: Advisor approval. Presents current theory and applications of quality engineering for assurance and verification of product quality at the hardware, processing, and system levels. Emphasizes statistical analysis, laboratory experiments and tests, and case problem-solving applications.

SPC 111 Reliability Objectives **3 Credits**

Prerequisites: QSC 101 - Quality Control Concepts and Techniques I, QSC 202 - Quality Control Concepts and Techniques II. Introduces the development and principles of reliability engineering. Establishes the mathematical and physical bases of reliability and applies the basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

SPC 112 Reliability Techniques **3 Credits**

Prerequisites: SPC 111 - Reliability Objectives. Studies reliability techniques and applications designed to obtain or improve reliability analysis.

SPC 201 Analysis of Metallurgical Failure **3 Credits**

Prerequisites: SPC 109 - Engineering Materials. Studies the factors responsible for the failure of components or structures, which may be motivated by either sound engineering practice or by legal considerations. Covers the proper application of failure analysis techniques to provide valuable feedback to design problems and materials limitations.

SPC 202 Process Control Gauging and Measurements **3 Credits**

Prerequisites: Advisor approval. Employs the science of measurement for obtaining accurate and reliable data using computerized statistical process control and mechanical metrology. Includes selection of various instruments for specific applications.

SPC 203 Codes, Specifications and Procedures Interpretations **3 Credits**

Prerequisites: Advisor approval. Explores the different types of codes, specifications, and procedures used in modern industry and provides opportunity for use and interpretation. Includes blueprint reading.

SPC 204 Statistical Concepts and Techniques **3 Credits**

Prerequisites: MAT 115 - Statistics. Presents various topics pertaining to statistical applications of quality control including frequency distribution, probability theory and application, and sampling techniques.

SPC 205 Non-Destructive Testing **3 Credits**

Prerequisites: None. Presents an overview of the relationship of nondestructive testing to the total quality function. Emphasizes the advantages and limitations of various test methods.

SPC 206 Mechanical Metrology **3 Credits**

Prerequisites: None. Provides instruction and laboratory experiments in the use of mechanical testing and measurement equipment for quality control.

SPC 207 Electrical Metrology **3 Credits**

Prerequisites: MAT 115 - Statistics, MAT 121 - Geometry-Trigonometry. Offers instruction and laboratory experiment in the use of electrical testing and measurement equipment for quality control.

SUR 101 Surgical Techniques **3 Credits**

Prerequisites: Admission to clinical phase of surgical program. **Corequisites:** SUR 102 - Surgical Procedures I and SUR 103 - Fundamentals of Surgical Technology. Introduces principles of sterile techniques and the operative care of the surgical patient. Includes the roles of scrubbing and circulating duties.

SUR 102 Surgical Procedures I **3 Credits**

Prerequisites: Admission to clinical phase of surgical program. **Corequisites:** SUR 102 - Surgical Procedures I and SUR 103 - Fundamentals of Surgical Technology. Provides orientation to the role of a surgical technologist. Introduces the surgical facility, aseptic technique, and basic surgical procedures with review of total patient care, including pre-operative care, diagnostic test, and immediate post-operative care.

SUR 103 Fundamentals of Surgical Technology **6 Credits**

Prerequisites: Admission to clinical phase of surgical program. **Corequisites:** SUR 101 - Surgical Techniques and SUR 102 - Surgical Procedures I. Demonstrate and supervises practice of general surgical procedures. Correlates theory to clinical by requiring students to actively participate as members of the surgical team. Includes laboratory and clinical experiences.

SUR 104 Surgical Procedures II **6 Credits**

Prerequisites: SUR 101 - Surgical Techniques, SUR 102 - Surgical Procedures I, and SUR 103 - Fundamentals of Surgical Technology. **Corequisites:** SUR 105 - Clinical Applications I. Studies advanced surgical procedures in relation to the total physiological aspects of surgical intervention. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure, and a review of total patient care.

SUR 105 Clinical Applications I **9 Credits**

Prerequisites: SUR 101 - Surgical Techniques, SUR 102 - Surgical Procedures I, and SUR 103 - Fundamentals of Surgical Technology. Correlates basic principles and theories of advanced surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills, and attitudes necessary for successful implementation of safe patient care in an operating room.

SUR 106 Surgical Procedures III **3 Credits**

Prerequisites: SUR 104 - Surgical Procedures II and SUR 105 - Clinical Applications I. **Corequisites:** SUR 107 - Clinical Applications II. Studies specialized surgical procedures. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure, and a review of total patient care.

SUR 107 Clinical Applications II **8 Credits**

Prerequisites: SUR 104 - Surgical Procedures II and SUR 105 - Clinical Applications I. **Corequisites:** SUR 106 - Surgical Procedures III. Correlates principles and theories of specialized surgical procedures to the clinical performance in affiliating hospitals. Includes the knowledge, skills, and attitudes necessary for successful implementation of safe patient care in an operating room.

TEC 101 Manufacturing Processes **3 Credits**

Prerequisites: None. Provides a basic survey of manufacturing processes, tools and equipment used by modern industry to convert bars, forgings, castings, plates, and sheet materials into finished products. Includes basic mechanics of materials removal and forming, metrology, quality control, and safety of operations. Introduces non-traditional manufacturing techniques.

TEC 102 Technical Graphics **3 Credits**

Prerequisites: None. Strengthens basic drafting skills to a proficient, technician level. Includes orthographic projections with auxiliary views, dimensioning, sectioning, and introductory tolerancing. Studies isometric and oblique views of parts.

TEC 103 Collaborative Team Skills **1 Credit**

Corequisites or **Prerequisites:** PSY 101 - Introduction to Psychology, SOC 111 - Introduction to Sociology or consent of instructor. Introduces students to effective communication skills, conflict resolution, team collaboration, and decision making.

TEC 104 Computer Fundamentals for Technology **3 Credits**

Prerequisites: None. Provides an introduction to microcomputer hardware, applications, and software. Emphasizes computer literacy, disk operating systems (DOS), computer programming, and industrial orientation. Surveys commonly used microcomputer applications.

TEC 106 Hazardous Materials and Control **3 Credits**

Prerequisites: None. Introduces hazardous materials, managing hazardous material incidents, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizers, poisons and corrosives, and radioactive emergencies. Emphasizes chemical identification, marking, storage, shipping and handling hazardous substances. Uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety procedures and practices.

TEC 113 Basic Electricity **3 Credits**

Prerequisites: MAT 050 - Basic Algebra or demonstrated competency. Studies electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, inductance, capacitance, and transformers. Stresses the use of standard electrical tests, electrical equipment, and troubleshooting procedures. Safety procedures and practices are emphasized.

VID 101 Audio/Video Systems Theory **3 Credits**

Prerequisites: None. Presents the theory and practices of electronic systems as related to audio and video recording and playback systems. Covers amplification, modulation, equalization, and signal processing.

VID 102 Media Technology **3 Credits**

Prerequisites: None. Provides hands-on experiences in set-up, maintenance and utilization of AV equipment such as film projection systems, overhead projectors, audio and video playback and recording systems and 35mm projection systems.

VID 104 Studio I **3 Credits**

Prerequisites: None. Provides knowledge and studio practices necessary to successfully perform sound recording, editing, and narration. Includes skill development in selecting microphones for specific use and basic audio mixing.

VID 106 Production Planning **3 Credits**

Prerequisites: None. Focuses on knowledge and skills needed to prepare objectives, audience analysis, and overall planning for video and audio productions. Develops visual flow and continuity, and applies principles of visual design to video storyboards. Includes coordinating audio cues to visual action.

VID 107 Video Production II **3 Credits**

Prerequisites: VIS 105 - Video and Sound I (or equivalent experience). Includes remote video "shoots" planning such as location scouting and site preparation. Includes projects in lighting, miking, camera and recorder setup, and on-location directing.

VID 109 Studio II **3 Credits**

Prerequisites: VIS 115 - Computer Graphics (or equivalent experience). Covers theory and application of multiple track audio recording. Includes hands-on studio practice in electronic reverberation, parametric equalization, and audio special effects. Focuses on timing, pacing, and stereo imaging in mixdown.

VID 110 Studio III **3 Credits**

Prerequisites: None. Covers techniques and procedures in electronic video tape editing. Includes assemble and insert editing, audio dubbing, lip sync, and microprocessor controlled editing. Covers rollback and time code editing systems with emphasis on the advantages and processes of each system as related to audio and video signal.

VID 202 Video Production III **3 Credits**

Prerequisites: None. Combines all aspects of video production for a comprehensive program including budgeting, procedures for staff assignments, and techniques of client relations. Includes generation of computer graphics, real-time animation, and electronic image enhancement.

VID 204 Special Projects I **3 Credits**

Prerequisites: None. Accommodates student interest in specific interest areas. Requires performance and completed work to be portfolio quality and reflect applicability to the main areas of student program.

VID 206 Independent Study I **3 Credits**

Prerequisites: None. Provides the opportunity to design a project for a specific program area. Includes development of project plan and expected outcomes. Restricts work to student program area and must be portfolio quality.

VID 207 Independent Study II **3 Credits**

Prerequisites: None. Provides opportunity to develop skills in specific areas of a visual communications program or to elect a course from the College curriculum which is supportive of a career in a chosen program. Includes computer programming, marketing, advertising, and an externship or supervision with approval from program chairperson. Requires instructor approval for program projects.

VID 280 Co-op/Internship **1-6 Credits**

Prerequisites: None. Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

VID 281-293 Special Topics in Video Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

VIS 101 Fundamentals of Design **3 Credits**

Prerequisites: None. Investigates design theory and color dynamics as applied to organizing the visual field. Provides experiences in applying design theory.

VIS 102 Fundamentals of Imaging **3 Credits**

Prerequisites: VIS 115 - Computer Graphics and VIS 101 - Fundamentals of Design. Introduces students to a full range of image input technology including conventional 35mm photography, still video capture, video camcorder, and computer scanners.

VIS 103 Introduction to Multi-Media **3 Credits**

Prerequisites: Advanced standing with Advisor approval. Explores various software programs involved in creating multi-media presentations, digital movies, digital animation, and analog video output.

VIS 105 Video and Sound **3 Credits**

Prerequisites: None. Serves as a comprehensive course for camcorder owners as well as an introductory course for video majors. Students plan, shoot, and post-produce videotapes which inform, instruct, and change attitudes. Project work includes exercises in lighting, miking, audio dubbing, incamera editing, and video graphics.

VIS 115 Computer Graphics **3 Credits**

Prerequisites: None. Introduces students to the computer's use in graphic design. Focuses on basic computer terminology and use, mastering fundamental skills, and developing efficient working styles. Develops skills by creating publications with page layout software.

VIS 201 Electronic Imaging **3 Credits**

Prerequisites: VIS 115 - Computer Graphics. Examines the area of still video photography and various electronic darkroom software packages. Provides experience with the electronic darkroom environment including editing processes, manipulation of images in black and white and color, and working with various output devices. Discusses four-color separations and pre-press procedures.

VIS 202 Color Prepress **3 Credits**

Prerequisites: VIS 201 - Electronic Imaging. Examines the technical specifications, translation issues, various output options, and trouble shooting of graphic files for high end printing processes. Studies and compares the roles of electronic production artists, of service bureaus, and of printing technologies.

VIS 205 Business Practices for Visual Artists **3 Credits**

Prerequisites: ART 217 - Advanced Graphic Design. Examines legal and business issues affecting the professional visual artist. Examines copyright and "work for hire", marketing and self-promotion, estimating and pricing, insurance and liability, and the computer's role in managing a business.

VIS 206 Interdisciplinary Studies **3 Credits**

Prerequisites: None. Offers students opportunities to complete selected projects while working in a team environment with students of other disciplines. Simulates situations found in industry.

VIS 207 Portfolio Preparation **3 Credits**

Prerequisites: Essentially all required program courses. Focuses on student's final preparation for the job interview. Finalizes project work demonstrating acquired knowledge and skills, along with resume and cover letter, for presentation to prospective employers. Provides students with the opportunity to use one credit for field study.

VIS 209 3D Rendering and Animation **3 Credits**

Prerequisites: None. Examines the virtual world of 3D and how it can be applied as an illustration and animation element in multimedia. Students will explore navigation, modeling, rendering, animation, and camera and lighting techniques.

VIS 281-293 Special Topics in Visual Communications Technology **1-5 Credits**

Prerequisites: None. Provides students with the opportunity to experience seminars, workshops, and other instructional activities on topics of interest that reinforce the concepts presented in their program area (Contact chief academic officer for more information).

WLD 100 Welding Processes **3 Credits**

Prerequisites: None. Provides general study of oxy-fuel, shielded metal arc, gas tungsten arc, gas metal arc, submerged arc, plasma arc, resistance, flash and upset, friction, electron beam, and laser welding processes. Covers equipment, techniques, electrodes, fuel gases and/or shielding gases, weld joint design, advantages and limitations, process applications, process variables, and operational costs.

WLD 101 Gas Welding I **3 Credits**

Prerequisites: None. Introduces basic oxy-acetylene brazing. Involves detailed study of the techniques of making welds in flat positions. Includes gas brazing. Provides additional background essential to a qualified welder.

WLD 103 Arc Welding I **3 Credits**

Prerequisites: None. Covers the welding of ferrous metals and alloys utilizing metallic manual arc welding methods. Includes procedures in joint design using "T" joint, lap joint and butt joint designs. Covers single pass and multi-pass techniques. Emphasizes safety hazards and safe practices in arc welding.

WLD 105 Welding Equipment and Electrical Maintenance **3 Credits**

Prerequisites: None. Focuses on the design of oxy-fuel welding and cutting equipment and electric arc welding and cutting equipment. Enables students to perform troubleshooting on the equipment and apply proper maintenance. Examines relationships of voltage, current and resistance on electrical circuits with emphasis on the production of heat from the flow of electric current through resistance.

WLD 107 Welding Troubleshooting **3 Credits**

Prerequisites: None. Covers evaluation of weldments, welding procedures and tolerances, and joint design and alignment.

WLD 108 Shielded Metal Arc Welding I **3 Credits**

Prerequisites: None. Provides students with knowledge of shielded metal arc welding operations and equipment. Provides extensive practice time to produce the skills to make satisfactory welds with this process. Emphasizes safety hazards and safety practices in arc welding.

WLD 109 Oxy-Acetylene Gas Welding and Cutting **3 Credits**

Prerequisites: None. Offers basic instruction in oxy-acetylene welding with emphasis on welding techniques in flat, horizontal, vertical and overhead positions. Includes brazing and flame cutting. Focuses on safety hazards and safe practices in oxy-acetylene welding and cutting.

WLD 110 Welding Fabrication I **3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I, WLD 109 - Oxy-Acetylene Gas Welding and Cutting, WLD 207 - Gas Metal Arc (MIG) Welding. Provides opportunities for practice in hands-on fabrication of welded products. Includes basic equipment used in fabrication.

WLD 115 Shop Practices I **3 Credits**

Prerequisites: None. Provides use of shop to practice various types of welding to improve operator skill.

WLD 116 Shop Practices II **3 Credits**

Prerequisites: WLD 115 - Shop Practices I. Continues open use of shop to practice various types of welding to improve operator skills.

WLD 117 Shop Practices III **3 Credits**

Prerequisites: WLD 116 - Shop Practices II. Continues open use of shop to practice various types of welding to improve operator skills.

WLD 120 Metallurgy Fundamentals **3 Credits**

Prerequisites: None. Studies properties and uses of ferrous and nonferrous metals and alloys, production of iron and steel, composition and properties of plain carbon steel and alloying elements, selection of tools, case hardening and destructive and nondestructive testing. Includes fundamentals of heat treatment and reactions occurring in metals subjected to various heat treatment methods and techniques.

WLD 201 Special Welding Processes **3 Credits**

Prerequisites: Advisor approval. Welding practice with various welding processes and techniques using advanced welding methods, machines, and equipment. Presents advanced arc welding with emphasis on use and orientation of submerged arc welding equipment.

WLD 202 Arc Welding II **3 Credits**

Prerequisites: WLD 103 - Arc Welding I. Offers instruction in electrode selections, weld techniques, power supplies, and current characteristics in preparation for test.

WLD 203 Pipe Welding I **3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I, WLD 206 - Shielded Metal Arc Welding II. Provides for extensive practice in the preparation and welding of pipe in the 2G and 5G position. Includes preparation, methods of welding, electrodes, and filler wires.

WLD 204 Pipe Welding II **3 Credits**

Prerequisites: WLD 203 - Pipe Welding I. Provides extensive training in the preparation and welding of pipe in the 5G and 6G position. Includes information on preparation, method of welding, and electrodes and filler wires used.

WLD 205 Welding Codes, Specifications and Estimating **3 Credits**

Prerequisites: Advisor approval. Provides students with different types of welding codes and testing operations. Covers procedures, specifications, and information about filler materials, positions, post-heat and pre-heat treatment, backing strips, preparations of parent metals, cleaning, and defects. Includes AWS and ASME code.

WLD 206 Shielded Metal Arc Welding II **3 Credits**

Prerequisites: WLD 108 - Shielded Metal Arc Welding I. Covers SMAW welding equipment and products used to produce groove type butt welds. Provides extensive practice to develop the skills to achieve satisfactory welds of this type. Safety hazards and safe practices in arc welding are emphasized.

WLD 207 Gas Metal Arc (MIG) Welding **3 Credits**

Prerequisites: None. Considers various gas metal arc welding (GMAW) processes including microwire, flux-core, innershield and submerged arc with emphasis on metal inert gas welding. Includes techniques of welding in all positions on various thicknesses of metal.

WLD 208 Gas Tungsten Arc (TIG) Welding **3 Credits**

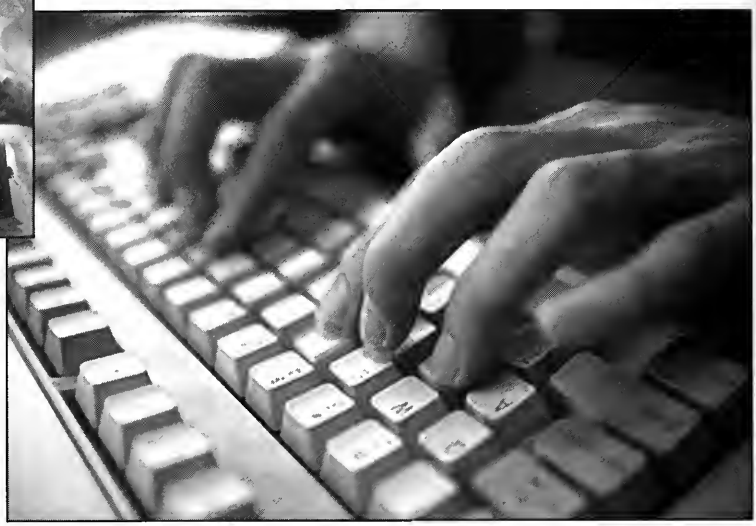
Prerequisites: WLD 109 - Oxy-Acetylene Gas Welding and Cutting. Provides students with thorough knowledge of the gas tungsten arc welding process. Includes detailed study of the techniques of making welds in all positions using the GTAW applications. Lectures and discussions provide additional background information essential to a qualified GTAW welder.

WLD 209 Welding Certification **3 Credits**

Prerequisites: Program chair approval. Prepares the student for certification in shielded arc, TIG, and MIG welding through study of the qualifications, procedures, and equipment standards. Includes a survey of qualifying agencies, associations, and societies.

WLD 210 Welding Fabrication II **3 Credits**

Prerequisites: WLD 110 - Welding Fabrication I. Provides for practice in hands-on fabrication and the use of related equipment.



Program Availability

Ivy Tech State College offers many educational programs. Not all programs are offered at all campuses, however, and the degrees available within a program may vary from campus to campus. Use this section to find out what programs and degrees are available at the campus that interests you.

Program Availability

Anderson Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Electronics Technology
Business Administration	Computer Information Systems	
Computer Information Systems	Electronics Technology	
Electronics Technology	General Technical Studies	
Industrial Technology	Industrial Technology	
Medical Assistant	Medical Assistant	

Bloomington Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Office Administration	Office Administration	Business Administration
Computer Information Systems	Design Technology	Electronics Technology
Design Technology	Electronics Technology	
Electronics Technology	General Technical Studies	
Industrial Technology	Industrial Technology	
	Practical Nursing	

Columbus Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Accounting
Office Administration	Office Administration	Business Administration
Automotive Technology	Business Administration	Computer Information Systems
Business Administration	Design Technology	Electronics Technology
Computer Information Systems	Electronics Technology	
Design Technology	General Technical Studies	
Electronics Technology	Industrial Technology	
Industrial Technology	Medical Assistant	
Manufacturing Technology	Practical Nursing	
Medical Assistant		
Visual Communications		

East Chicago Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Electronics Technology
Office Administration	Office Administration	
Automotive Technology	Automotive Technology	
Computer Information Systems	Computer Information Systems	
Design Technology	Design Technology	
Electronics Technology	Electronics Technology	
Hospitality Administration	General Technical Studies	
Industrial Technology	Hospitality Administration	
	Industrial Technology	

Elkhart Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Office Administration	Accounting
Office Administration	Computer Information Systems	Design Technology
Computer Information Systems	Electronics Technology	Electronics Technology
Design Technology	General Technical Studies	
Electronics Technology	Industrial Technology	
Industrial Technology	Practical Nursing	
Recreational Vehicle Repair Tech	Recreational Vehicle Repair Tech	

Evansville Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Automotive Technology	Office Administration	Business Administration
Business Administration	Automotive Technology	Computer Information Systems
Computer Information Systems	Electronics Technology	Electronics Technology
Design Technology	General Technical Studies	Visual Communications
Electronics Technology	Industrial Technology	
Industrial Technology	Interior Design	
Interior Design	Medical Assistant	
Manufacturing Technology	Practical Nursing	
Medical Assistant	Office Administration	
Office Administration		
Paramedic Science		
Surgical Technology		
Visual Communications		

Fort Wayne Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Child Development
Automotive Technology	Automotive Technology	Electronics Technology
Business Administration	Business Administration	Human Services
Child Development	Child Development	Paralegal
Computer Information Systems	Computer Information Systems	
Construction Technology	Construction Technology	
Design Technology	Design Technology	
Electronics Technology	Electronics Technology	
Hospitality Administration	General Technical Studies	
Human Services	Hospitality Administration	
Industrial Technology	Human Services	
Manufacturing Technology	Industrial Technology	
Medical Assistant	Manufacturing Technology	
Public Safety	Medical Assistant	
Respiratory Care	Paralegal	
	Practical Nursing	
	Public Safety	

Gary Campus

Associate of Applied Science
Accounting
Office Administration
Business Administration
Computer Information Systems
Design Technology
Electronics Technology
Hospitality Administration
Industrial Technology
Manufacturing Technology

Technical Certificate
Accounting
Office Administration
Business Administration
Computer Information Systems
Design Technology
Electronics Technology
General Technical Studies
Hospitality Administration
Industrial Technology
Manufacturing Technology
Public Safety
Practical Nursing

Associate of Science
Office Administration
Assoc of Science in Nursing
Business Administration
Computer Information Systems
Electronics Technology
Physical Therapist Assistant

Indianapolis Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Design Technology
Electronics Technology
Hospitality Administration
Human Services
Industrial Technology
Manufacturing Technology
Medical Assistant
Paralegal
Interior Design
Public Safety
Radiologic Technology
Respiratory Care
Surgical Technology

Technical Certificate
Office Administration
Child Development
Design Technology
General Technical Studies
Industrial Technology
Manufacturing Technology
Medical Assistant
Interior Design
Practical Nursing

Associate of Science
Accounting
Office Administration
Assoc of Science in Nursing
Business Administration
Child Development
Electronics Technology
Human Services
Occupatl. Therapy Assisting

Kokomo Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Construction Technology
Design Technology
Electronics Technology
Industrial Technology
Manufacturing Technology
Medical Assistant
Paramedic Science

Technical Certificate
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Construction Technology
Design Technology
Electronics Technology
General Technical Studies
Industrial Technology
Medical Assistant
Computer Information Systems
Practical Nursing

Associate of Science
Accounting
Business Administration
Computer Information Systems
Electronics Technology
Physical Therapist Assistant
Computer Information Systems

Lafayette Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Design Technology
Industrial Technology
Medical Assistant
Surgical Technology

Technical Certificate
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Dental Assistant
Design Technology
General Technical Studies
Industrial Technology
Medical Assistant
Practical Nursing
Respiratory Care

Associate of Science
Accounting
Assoc of Science in Nursing
Business Administration
Computer Information Systems
Respiratory Care

Lawrenceburg Campus

Associate of Applied Science
Accounting
Computer Information Systems

Technical Certificate
Accounting
Office Administration
General Technical Studies
Industrial Technology

Associate of Science
Accounting
Computer Information Systems

Logansport Campus

Associate of Applied Science
Office Administration
Computer Information Systems
Design Technology
Industrial Technology
Manufacturing Technology

Technical Certificate
Accounting
Office Administration
Computer Information Systems
Design Technology
Electronics Technology
General Technical Studies
Industrial Technology
Manufacturing Technology

Associate of Science
Office Administration
Computer Information Systems

Madison Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Assoc of Science in Nursing
Office Administration	Office Administration	Business Administration
Business Administration	Business Administration	Electronics Technology
Computer Information Systems	Computer Information Systems	
Electronics Technology	General Technical Studies	
Industrial Technology	Industrial Technology	
Manufacturing Technology	Medical Assistant	
	Practical Nursing	

Marion Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Electronics Technology
Business Administration	Electronics Technology	
Computer Information Systems	Computer Information Systems	
Electronics Technology	General Technical Studies	
Medical Assistant	Medical Assistant	

Muncie Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Computer Information Systems
Automotive Technology	Automotive Technology	Electronics Technology
Business Administration	Business Administration	Manufacturing Technology
Child Development	Computer Information Systems	Physical Therapist Assistant
Computer Information Systems	Construction Technology	
Construction Technology	Electronics Technology	
Design Technology	General Technical Studies	
Electronics Technology	Industrial Technology	
Human Services	Manufacturing Technology	
Industrial Technology	Medical Assistant	
Manufacturing Technology	Practical Nursing	
Medical Assistant		

Richmond Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Construction Technology
Electronics Technology
Industrial Technology
Manufacturing Technology
Medical Assistant

Technical Certificate
Accounting
Office Administration
Computer Information Systems
Construction Technology
General Technical Studies
Industrial Technology
Practical Nursing

Associate of Science
Assoc of Science in Nursing
Business Administration
Child Development
Computer Information Systems
Electronics Technology

Sellersburg Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Construction Technology
Design Technology
Electronics Technology
Industrial Technology
Manufacturing Technology
Medical Assistant
Visual Communications

Technical Certificate
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Construction Technology
Design Technology
Electronics Technology
General Technical Studies
Industrial Technology
Manufacturing Technology
Medical Assistant
Practical Nursing

Associate of Science
Assoc of Science in Nursing
Business Administration
Electronics Technology

South Bend Campus

Associate of Applied Science
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Design Technology
Electronics Technology
Industrial Technology
Interior Design
Manufacturing Technology
Medical Assistant
Medical Lab Technician
Video Technology
Visual Communications

Technical Certificate
Accounting
Office Administration
Automotive Technology
Business Administration
Computer Information Systems
Design Technology
Electronics Technology
General Technical Studies
Industrial Technology
Manufacturing Technology
Medical Assistant
Practical Nursing

Associate of Science
Associate of Science in Nursing
Business Administration
Electronics Technology

Terre Haute Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Electronics Technology
Aircraft Maintenance Tech	Automotive Technology	Human Services
Automotive Technology	Business Administration	Manufacturing Technology
Business Administration	College/Ind Job Title Prog	
Computer Information Systems	Computer Information Systems	
Design Technology	General Technical Studies	
Electronics Technology	Industrial Technology	
Human Services	Medical Assistant	
Industrial Technology	Practical Nursing	
Manufacturing Technology	Public Safety	
Medical Assistant	Practical Nursing	
Medical Lab Technician		
Public Safety		
Quality Science		
Radiologic Technology		
Visual Communications		
Paramedic Science		

Valparaiso Campus

Associate of Applied Science	Technical Certificate	Associate of Science
Accounting	Accounting	Business Administration
Office Administration	Office Administration	Electronics Technology
Automotive Technology	Automotive Technology	
Business Administration	Business Administration	
Computer Information Systems	Computer Information Systems	
Electronics Technology	Design Technology	
Industrial Technology	Electronics Technology	
Medical Assistant	General Technical Studies	
Respiratory Care	Industrial Technology	
Surgical Technology	Medical Assistant	
	Practical Nursing	
	Respiratory Care	

Warsaw Campus

Associate of Applied Science	Technical Certificate
Computer Information Systems	Accounting
	Office Administration
	Business Administration
	Computer Information Systems
	General Technical Studies

Faculty & Staff

STATE BOARD OF TRUSTEES

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Paul H. Kloth, Merrillville
Bill R. Livvix, Indianapolis
Albert H. Schumaker II, Columbus
Darryl A. Smith, Madison
Roy J. Winkler, Anderson

COLLEGE OFFICERS

Lamkin, Gerald I., President
BS in Business, MS in Business, Indiana State University

Harris, Charles W., Vice President for Development

BS in Education, Ball State University; JD, Indiana University School of Law

Kramer, William D., Vice President for Planning and Education

BS in Health Education, Slippery Rock State College; MS in Physical Education, PED in Physical Education, Educational Research, Indiana University

Morris, William F., Vice President for Administration

BS in Business Administration, Indiana State University

Taylor, Thomas H., Vice President Treasurer

AB in Political Science, Government and History, Butler University; MPA in Higher Education Administration, Indiana University

REGION 1

OFFICERS

Cole, Darnell, Vice President/Chancellor

AA in Public Administration, BA in Business Administration/Accounting, Ferris State University; MA in Education Administration, Central Michigan University; PhD in Education Administration Labor Industrial Relations/ Public Health, Michigan State University

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Comer, Norman, Executive Dean, East Chicago

Schoonmaker, Diane, Dean of Instruction, Region 1

BA in English and Classics, North Central College; MSED in Counselor Education, Northern Illinois University

FACULTY

Adams, Roger L., Instructor in General Education, East Chicago

BA in English, MA in Education, Western Michigan University

Adamski, John A., Instructor in General Education, Gary

BS in Speech, Indiana State University; MS in Education, Purdue University-Calumet

Alspaugh, Deborah M., Instructor in Basic Skills, Gary

BS in Education, Masters of Public Affairs, Indiana University

Baig, Sajid, Instructor in Basic Skills and General Education, Gary

BS in Education, BS in English, MA in English, Islamia University; MA in Instruction & Training, Governors State University

Banks, Mary A., Instructor in Office Administration, East Chicago

BS in Education, Alcorn A & M; MS in Education, Indiana University

Bell, Emily A., Instructor in Basic Skills, Valparaiso

BS in Education, Akron University; MS in Education, Indiana University

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AA in Business Accounting, Purdue University; BA in Organizational Management, Calumet College of St. Joseph

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AD in Nursing, Indiana Central; BS in Nursing, Purdue University

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AS in Electronics, Valparaiso Tech; BS in Business Administration, Valparaiso University; MBA, Indiana Wesleyan University

Charbonneau, James R., Instructor in Electronics, Gary

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Dafiaghor, Abel, Clinical Coordinator in Physical Therapist Assistant, Gary, BS in Physiotherapy, Lagos University

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AD in Nursing, BS in Nursing, Purdue University

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BS in Physical Therapy, University of Illinois, Chicago Circle

Excell, Donna J., Instructor in Administrative Office Technology, Gary

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BA in Business Administration, University of Georgia; MBA, Roosevelt University

Gidcumb, David A., Instructor in Computer Information Systems, Gary

AAS in Electrical Engineering, BS in Mathematics and Computers, BS in Electronics Technology, Purdue University

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ASE Master Automotive Technician

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Halik, Deborah A., Department Chair in Accounting, Gary and East Chicago

BS in Accounting, Calumet College; MS in Education, Purdue University

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Apprenticeship Training-Welding from Inland Steel; Certified, American Society of Mechanical Engineers

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BS in Elementary Education, Indiana University; MA in Liberal Arts, Valparaiso University

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Matusik, Sharon, Instructor in Hospitality, Gary and East Chicago

BS in Restaurant, Hotel, and Institutional Management, MS in Secondary Education, Purdue University

Melevage, Bernard A., Instructor in General Education, Gary

BA in Education, St. Meinrad College; EdS in Education, University of Chicago; MA in Education, University of Notre Dame; EdD in Higher Education, Indiana University

Miller, Harry B., Instructor in Industrial Technology, Valparaiso

Apprenticeship Training Welding; Certificate - Welding

Morikis, Ethel, Program Chair in Medical Assistant, Valparaiso

AS in Nursing, BS in Nursing, Indiana University

Muha, Robert A., Instructor in Industrial Technology, East Chicago

AAS in Heating/Air Conditioning/Refrigeration Technology, Ivy Tech State College

Murrell, Jimmie L., Instructor in Auto Service, East Chicago

BA in Industrial Education, Chicago State University; Certified - The National Institute of Automotive Service Excellence

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BA in Philosophy, University of Notre Dame; MA in Teaching, Purdue University

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BA, Tri-State College, MS Ed, Purdue West Lafayette

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AAS in Nursing, Purdue University; Certified Surgical Technologist

Pollard, Louise F., Department Chair in Basic Skills, Gary

BS in Education, Wayne State University; MRC in Rehabilitation Counseling, Arkansas State University

Remar, John M., Instructor in Business Administration, East Chicago

BGS in General Studies, Roosevelt University; MS in Education, Chicago State University

Roman, Socorro M., Department Chair in Nursing, Gary

AAS in Nursing, BS in Nursing, MS in Nursing, Purdue University

Rosillo, Laura, Instructor in General Education/Natural Science, East Chicago

BA, Indiana University; MD, IU School of Medicine, Indianapolis

Schoenfelder, John H., Department Chair in Business Administration, Valparaiso

AAS in Marketing, Moraine Valley College; BA in Business Administration, MA in Business Administration, Governors State University

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Skoski, Aco, Instructor in Computer Aided Design, Valparaiso

BA in Electrical Engineering, "Kiril I Metodij" Skopje Macedonia

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BED in Natural Sciences, MS in Biology, Chicago State University; MHA in Health, Governors State University

Stowers, Beverly A., Instructor in Office Administration, Valparaiso

BA in Secretarial Science, Cedarville College; MBA, Indiana Wesleyan University

Tuesburg, Arthur B., Department Chair in Industrial Technology, Gary

Certificate-Mobile Engineering Services/Vehicle Maintenance/Advanced School Institute

Vega, Frances T., Instructor in Basic Skills, East Chicago

BS in Electronics Technology, Indiana State University

Warner, Karen L., Program Chair in Practical Nursing, Valparaiso

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AAS in Heating/Air Conditioning/Refrigeration, Ivy Tech State College

Zernik, Joseph D., Instructor in Accounting, Gary

BS in Accounting, Calumet College; MS in Education, Purdue University

REGION 2

OFFICERS

Lutz, Carl, Vice President/Chancellor

BS in Engineering, Michigan State University; MS in Engineering, PhD in Engineering, Carnegie-Mellon University

Bruce, Gene, Executive Dean, South Bend

BS in Mathematics Education, MA in Education Administration, Central Michigan University; Ed.D in Education, University of Maryland

Stalter, Harold, Site Director, Elkhart

BS in Chemistry, Central Michigan University; MS in Business Administration, Michigan State University

Grill, Stephen, Site Director, Warsaw

BA in Speech/Communication, Grace College; MA in Speech, EdD in Educational Administration, Ball State University

Batzer, Lyn A., Dean of Instruction, Region 2

BS in Education, Northern Illinois University; MS in Education, Indiana University-South Bend, Ed.D. in Educational Leadership, Western Michigan University

FACULTY

Adamczyk, Richard, Instructor in Manufacturing Technology, South Bend

BS in Civil Engineering, University of Krakow; Technical Mechanic and Teacher Degree, Pedagogical Technical School, Kielce (Poland)

Alpiner, Marvin L., Department Chair-Business Division, Elkhart

BS in Chemistry, University of Detroit; MS in Biology, Boston University; MBA, Indiana University; DDS, University of Detroit

Bartels, Barbara A., Instructor in Office Administration, Warsaw

BS in Business Education, Ball State University; MS in Education, St. Francis College

Boembeke, Angela, Instructor in Visual Communications, South Bend

BA in Graphic Design, Anderson University; MBA, Indiana Wesleyan University

Borowski, George J., Instructor in Industrial Technology, South Bend

AAS in Heating/Air Conditioning/Refrigeration, Ivy Tech State College; Certificate of Competence - NOCTI in Air Conditioning/Heating/Refrigeration; BAS, Heating and Air Conditioning, Refrigeration, Siena Heights College

Burkholder, Myrna, Instructor in Basic Skills, Elkhart

BA in Art Education, Goshen College; MA in Art and Education, Teachers College-Columbia University; MA in Reading/Learning Disabilities, New York University

Burtch, Gale R., Instructor in Basic Skills, Elkhart

BA in Sociology and Forensics, Indiana University - Bloomington; MS in Counseling and Guidance, Indiana University - South Bend

Coad, Dolly, Instructor in Practical Nursing, South Bend

AA in Nursing, South Suburban College; BS in Health Studies, MA in Educational Leadership, Western Michigan University

Comeau, John, Instructor in General Education/English, South Bend

BA in English, University of Notre Dame; MS in Liberal Studies, Indiana University

Conley, Ruth, Instructor in Practical Nursing, South Bend

RN, Memorial Hospital School of Nursing; BS in Nursing, Bethel College

Cornn, Kenneth, Instructor in Practical Nursing, South Bend

LPN, Pineville School of Practical Nursing; ADN, Somerset Community College, BS in Nursing, University of Kentucky; MS in Nursing, Bellarmine College

Curry, Deborah, Instructor in Practical Nursing, South Bend

BS in Nursing, Pittsburg State University

Demmon, Terri, Senior Instructor in Computer Information Services, South Bend

BA in Sociology, Michigan State University; Education Certification in Computer Science, Masters in Liberal Studies, Indiana University

DePaul, Louis, Instructor in Accounting, Elkhart

BS in Business/Accounting, Youngstown State University; MBA in Management and Administrative Studies, Indiana University; CPA

Durren, Michael, Program Chair in Electronics, South Bend

BS in Electrical Engineering Technology, MS in Electrical Engineering, Western Michigan University; Certified Quality Engineer - American Society for Quality Control

Freel, Linda, Instructor in Visual Communications, South Bend

BA in Elementary Education, Bethel College; MS in Elementary Education, Indiana University - South Bend; MFA, University of Notre Dame

Freygang, Jim, Instructor in Design Technology, South Bend

AAS in CAD Drafting, Ivy Tech State College; BFA in Art, St. Francis College

Garrels, Martha, Program Chair in Medical Assistant, South Bend

BS in Medical Technology, Michigan State University; MS in Administration, University of Notre Dame; Registered Medical Technologist

Gerbasich, Karen, Instructor in Practical Nursing, South Bend

BS in Nursing, St. Mary's College

Gesellschap, Mary, Senior Instructor in Nursing, South Bend

BS in Nursing, Ball State University; MS in Nursing, Valparaiso University

Gick, Desmond, Master Instructor in Computer Information Services, South Bend

BS in Industrial Management, Purdue University; CNA-Certified Netware Administrator

Hackemann, Sandra, Instructor in Basic Skills, South Bend

BA in English, Millsaps College; MA in American Literature, George Peabody College

Harris, Imogene, Division Chair in Business, South Bend

BS in Secondary Education/Business Education, Southern University

Henkel, Chuck, Division Chair in Technology, South Bend

BA in Biology Teaching/General Science Teaching, Bethel College; MA in Community College Teaching/Biology, Ed.S. in Education/Administration, Western Michigan University

Hiers, Judy, Senior Instructor in Office Administration, South Bend

Associate in Business Studies, Delta College; BS in Business Education, Western Michigan University

Hinkson, Robin, Instructor in Office Administration, South Bend

BS in Computer Information System Management, Bethel College

Huettl, Robert, Program Chair in Automotive Technology, South Bend

AS, University of Wisconsin-Barron County Campus; BS in Vocational/Technical and Adult Education, University of Wisconsin-Stout

Jauregui, Luis, Program Chair in Computer Information Systems, South Bend

BSSE in Electrical Engineering, Iteso University; MS in Computer Science, University of Illinois

Kelly, Mark, Division Chair in Visual Technologies, South Bend

BA in Philosophy, DePauw University; Master of Fine Arts, University of Notre Dame

Kent, Katherine, Program Chair in Interior Design, South Bend

BS in Interior Design, Andrews University; MA in Home Economics, Western Michigan University

Keusch, Donna, Program Chair in Practical Nursing, South Bend

RN Diploma, Memorial Hospital of South Bend; BS in Nursing, Indiana University; MS in Nursing, Valparaiso University

Krakowski, Beth, Instructor in Practical Nursing, South Bend

RN Diploma, Memorial Hospital of South Bend; BS in Nursing, University of Evansville

Kunter, Kay, Instructor in Practical Nursing, South Bend

Diploma, Union Hospital School of Nursing; BS in Nursing, Indiana State University; MS in Education, Indiana University

Lankston, Thomas, Instructor in Basic Skills, South Bend

BS in Mathematics, Purdue University; Teacher Certification, Indiana University - South Bend; MS in Mathematics, Michigan State University

Ledsome, Daniel, Instructor in General Education, South Bend

BA in Mathematics, Muskingum College; MA in Mathematics, Miami University

Mason, George, Master Instructor in Electronics, South Bend

BS in Liberal Arts: Mathematics/Physics, Indiana State University

Maxson, Randy, Instructor in Basic Skills, Warsaw

BA in English Education/Speech Education/Bible, Grace College; Master of Education in English, Millersville State College

McDonel, James, Division Chair in General Education, South Bend

B.S. Ed Biology, Comprehensive Science, Millersville University; PhD in Microbiology, Intestinal Physiology, University of Notre Dame

Measell, Nancy, Instructor in Medical Assistant, South Bend

AAS in Medical Assisting, J. Sargent Reynolds Community College; BA in Psychology, Winthrop College; CMA

Meloy, Al, Program Chair in Visual Communications, South Bend

BS in Education/Art, Ball State University

Miether, Evan,Technology Division Coordinator, Elkhart

BS in Business Management, Oklahoma City University

Pippenger, Melissa, Instructor in Practical Nursing, Elkhart

BS in Nursing, Purdue University

Primrose, Pamela, Program Chair in Medical Laboratory Technician, South Bend

BS in Medical Technology, Indiana University; Certificate of Completion of Medical Technology Training, South Bend Medical Foundation School of Medical Technology; RMT

Sarsfield, Diane, Instructor in Nursing, South Bend

RN Diploma, Saint Vincent Health Center School of Nursing; BS in Nursing, Villa Maria College; MS in Nursing, Gannon University

Sattler, Lauran, Instructor in Computer Information Systems, Warsaw

AAS, Computer Information Systems, Ivy Tech State College; BS in Organizational Management,Goshen College

Shafer, Carol, Instructor in Nursing, South Bend

RN Diploma, Memorial Hospital School of Nursing; BS in Nursing, Defiance College; MS in Education, St. Francis College

Shelton, Jim, Department Chair in Industrial Technology, South Bend

BS in Industrial Technology, Eastern Kentucky University; MS in Secondary Education, Indiana University

Simala, Arlene, Instructor in Nursing, South Bend

BS in Nursing, St. Mary's College; MS in Education, Indiana University - South Bend

Smyers, Harry, Instructor in Automotive Services, South Bend

TC in Automotive, Ivy Tech State College, ASE Master Auto Certified, Certified Chevrolet Technician

Stevens, Julia, Senior Instructor in Nursing, South Bend

Diploma in Nursing, Lincoln General Hospital School of Nursing; BS in Natural Sciences, Nebraska Wesleyan University; BS in Nursing, Central Missouri State University; MS in Nursing Administration, Andrews University

Stitt, Barbara, Instructor in Nursing, South Bend

LPN; Associate Degree in Nursing, Southwestern Michigan College; BS in Nursing, Ferris State University

Sypniewski, Sue, Program Chair in Nursing, South Bend

BS in Nursing, Marquette University; MS in Administration, University of Notre Dame; MS in Nursing Administration, Andrews University

VanOosterum, Cynthia, Program Chair in Accounting, South Bend

BS in Business Administration/Accounting, Indiana University South Bend; Master in Business Administration, Indiana University South Bend

Walgamuth, Joann, Instructor in Business Management, Warsaw

AA, Secretarial Sciences, Marshalltown Community College; BS in Behavioral Science; MA in Human Resources Managment, University of Houston-Clear Lake

Waltz-Freel, Kathryn, Program Chair in Basic Skills, South Bend

BA in English, Montana State University; MS in Liberal Studies, Indiana University

Wcisel, Mary, Master Instructor in Nursing, South Bend

BS in Nursing/Biological Sciences, Ball State University; MS in Nursing, Indiana University

Weis, Thomas, Instructor in Visual Communications, South Bend

BA in Journalism, Indiana University

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BS in Nursing, St. Francis College; MS in Nursing Education, DePaul University

Wolfson, Colette, Instructor in Business Administration, South Bend

BS in Business Marketing, Indiana University; MS in Business Administration, Indiana University

Yocom, James, Instructor in Video Technology, South Bend

AAS in Audio Visual Communication, Ivy Tech State College

Zink, Frank, Instructor in General Education, South Bend

BA in Psychology, Flint College; M. Divinity, Asbury Theological Seminary

REGION 3

OFFICERS

Rupright, Jon, Vice President/Chancellor

BA in Business and Education, Huntington College; MA in Psychology, St. Francis College

Keen, Mark A., Dean of Instructional Affairs

AAS in Electronics, ITT Technical Institute; BS in Automated Manufacturing Technology, ITT Technical Institute; MS in Management, Indiana Wesleyan University

FACULTY

Bickel, Julia M., Learning Center Coordinator; Instructor in Basic Skills

BS in Elementary Education, MA in Elementary Education, Ball State University

Bickley, Myron H., Program Chairperson, Senior Instructor, Electronics Technology

BS in Electrical Engineering, Purdue University; MS in Education, Indiana University

Bissell, Theresa, Coordinator/Instructor, General Education/Science

BA in Bio-Science, DePauw University; MS in Bio-Science, Purdue University

Charles, Jeri E., Instructor in Child Development

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Crowder, Kay M., Instructor, Child Development

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Dever, JoAnn, Master Instructor, Program Chairperson in Practical Nursing

BS in Nursing, University of Evansville; MS Ed in Nursing, Indiana University; RN

Diller, Jewel K., Senior Instructor in Practical Nursing

BS in Missionary Nursing, Fort Wayne Bible College; MS in Secondary Education, Indiana University; RN

Eads, Patricia E., Instructor in Practical Nursing

AAS in Nursing, Indiana Purdue-Fort Wayne; BS in Nursing, Ball State University; RN

Enea, Charles, Instructor, Program Chairperson, Industrial Technology

BS in Mechanical Engineering, Ball State University

Eyler, George Alan, Master Instructor, Program Chairperson, Hospitality Administration

BS in General Studies, Indiana University

Falk, John E., Instructor, Program Chair in Construction Technology

Licensed Journeyman Plumber; Licensed Plumbing Contractor

Frazier, David L., Master Instructor, Department Chair in Design Technology, Manufacturing Technology

AAS in Machine Tool Technology, Ivy Tech State College

Frazier, Margaret R., Master Instructor, Program Chair in Medical Assistant

BS in Health Arts, College of St. Francis; RN; CMA

Gallo, Edward, Coordinator, Instructor/General Education - Mathematics

BS in Mathematics, Worcester Polytechnic Institute, MS in Mathematics, University of Texas

Geib, Janet L., Master Instructor, Program Chair in Office Administration

BS in Business Education, MA Physical Education (Business Education Minor), Ball State University

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Heise, Joan M., Instructor, Program Chair in Computer Information Systems

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AAS in Welding, Ivy Tech State College

Hess, Jr., John W., Instructor, Program Chair in Business Administration

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Jordan, Denise M., Senior Instructor in Practical Nursing

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Kahle, M. Sue, Senior Instructor, Program Chair in General Education

BA in English, MA in English, State University of New York; PhD in American Civilization, University of Texas

Keith, Janet E., Master Instructor in Practical Nursing

BS in Special Science Nursing, Defiance College; MS in Secondary Education, Indiana University; RN

Kelsey, Ralph L., Senior Instructor in Automotive Technology

AAS in Supervision, Purdue University

Khouli, Vicki L., Instructor in Practical Nursing

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AB in Math, MA in Math, Wheaton College; PhD in Religion, New York State University

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BS in General Studies, IUPU-Ft. Wayne RRT; RPFT

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Stroup, Donald L., Senior Instructor in Computer Information Systems

BS in Industrial Education, Purdue University; MBA, Michigan State University

Sullivan, Sandra, Instructor in Practical Nursing

BS in Nursing, Walsh College; RN

Surface, Michael O., Instructor in Electronics

BS in Electrical Engineering, BS in Mechanical Engineering, Purdue University

Thierer, Nina L., Instructor in Medical Assistant

AAS in Medical Assistant, Ivy Tech State College; BA in Business Administration, Indiana Institute of Technology

Treff, Conrad C., Instructor in Industrial Technology

BS in Mechanical Engineering, Fairleigh Dickinson University

VanValkenburg, Maria Alene, Senior Instructor in Basic Skills

BSA in Education, Nazareth College of Rochester; MA in Theology, University of Notre Dame

Walter, John L., Senior Instructor, Division Chair in Technology Division

AAS in Industrial Supervision, Ivy Tech State College; BS in Management, Indiana Wesleyan University

Washler, Edwin L., Senior Instructor, Division Chair in Business Division

BS in Agriculture, Purdue University; MS in School Administration, Indiana University; MS in Education, Purdue University

Watson, Duane L., Instructor in Automotive Technology

AAS in Automotive Engineering, Indiana Technical Institute; ASE Master Certified Mechanic

Watters, Mildred D., Senior Instructor in Basic Skills

BS in Music Education, MA in Adult Education, Ball State University

Weiss, Anna C., Instructor in Basic Skills

BA in American Literature, Middlebury College; MS in Secondary Education, Indiana University; CPA

Wesner, Joyce A., Instructor in Design Technology

AAS in Drafting/CAD Technology, Ivy Tech State College; BS in Teacher Education, Ball State University

Wilson, Jerry F., Instructor in Hospitality Administration

REGION 4

OFFICERS

Doversberger, Elizabeth J, Chancellor

BS in Physical Science, Purdue University; MA in Education, Bradley University; PhD in Educational Administration, Illinois State University

North, Mary Yowell, Dean of Instruction

BS in Occupational Therapy, University of Kansas; MEd in Professional Health Education, Central State University; PhD in Adult Education, University of Oklahoma

FACULTY

Abel, Cindy A., Program Chair, Senior Instructor in Medical Assistant

AAS in Medical Assistant, Ivy Tech State College; BS in Business Administration, Indiana Wesleyan University; CMA, NAC; EMTC

Abudiab, Nizar, Senior Instructor, Computer Information Systems

BS in Civil Engineering; MS in Mathematical Science/Statistics; MS in Mathematical Science/Computer Science, McNeese State University

Alexander, Stanley W, Senior Instructor, Psychology

BA in History, Cornell University; M Ed in Elementary Education, Boston College; PhD in Psychology, University of Michigan

Ballard, Donna K., Writing Coordinator and Senior Instructor, Basic Skills Advancement

BA in English, BA in History, MA in English Education, University of North Carolina-Charlotte; MA in English, Purdue University

Bitar, Susan K., Instructor in Practical Nursing

AAS in Nursing, Purdue University; BS in Health Arts, College of Saint Francis; RN

Booth, Craig, Senior Instructor, Communications

BA in Communications; MA in Communications, San Jose State University; PhD in Communications, Purdue University

Bria, Frank, Instructor, Mathematics

BS in Mathematics, Brigham Young University; MS in Mathematics, Purdue University

Bricker, Ken, Program Chair and Instructor, Industrial Maintenance

AS in Industrial Safety Engineering, Laramie College; BS in Industrial Engineering, Purdue University

Buckles, Judith A., Program Chair, Master Instructor in Dental Assistant

AAS in Trade & Tech Teaching, BS in Industrial Technology, Purdue University; CDA

Doherty, Michael J, Program Chair, Senior Instructor in Computer Information Systems

BS in Zoology, Western Illinois University; MS in Biological Sciences, University of Illinois-Chicago, MS in Public Policy and Public Administration, Purdue University

Dolk, Karen L., Program Chair, Master Instructor in Nursing

BS in Nursing, University of Pittsburgh; MS in Pediatric Nursing, Case Western Reserve University; RN

Dougherty, Karen K., Senior Instructor in Dental Assistant

Technical Certificate in Dental Assistant, Ivy Tech State College; CDA; EFDA; BS in Business Administration, Indiana Wesleyan University

Duda, Marsha K., Program Chair, Master Instructor in Practical Nursing

AS in Nursing, Purdue University; BS in Nursing, Michigan State University; MS in Nursing, Indiana University; RN

Foster, Royce F., Technology Division Chair, Automotive Technology, Master Instructor,

AAS in Automotive Technology; AAS in Trade and Tech Teaching, BS in Industrial Education, Purdue University; ASE Certified

Franchville, Elizabeth A., Instructor in Practical Nursing

Diploma in Nursing, Deaconess Hospital School of Nursing; BS in Nursing, Purdue University; RN

Hale, Sandra, Senior Instructor, Nursing

AS Nursing, Indiana Central University; BS in Nursing, MS in Nursing, Purdue University; RN

Hall, Dorothy S., Program Chair, Senior Instructor in Surgical Technology

Technical Certificate in Surgical Technology, Ivy Tech State College; AAS in Nursing, Purdue University; BS in Nursing, Graceland College; CST

Ham, David, Program Chair and Instructor, Design Technology

AS in Technical Graphics; BS in Technical Graphics, Purdue University

Hannigan, Elaine C., Senior Instructor in Nursing

Diploma in Nursing, Wesley-Passavant School of Nursing; BS in Nursing, University of Evansville; RN

Helvie, Brenda A, Senior Instructor, Practical Nursing

BS in Nursing, Indiana University; RN

James, Peggy S, Program Chair, Senior Instructor in Respiratory Care

AAS in Respiratory Care, Lansing Community College; BS, MBA in Business Administration, Indiana Wesleyan University; RRT; CRTT; CPFT

Jamrose, Daniel J., Senior Instructor in Business Administration

AAS in Mechanical Engineering, BS in Industrial Education, Purdue University

Jones, Elizabeth A., Senior Instructor in Nursing

AAS in Nursing, BS in Nursing, MS in Child Development & Family Studies, Purdue University; RN

Lichti, Janet J., Instructor, Anatomy and Physiology

BA in Biology, Clark University; MS in Cellular and Molecular Biology, Purdue University

Maniak, Lynn M, Instructor, Nursing

Diploma in Nursing, St. Mary's Mercy Hospital; BS in Nursing, Valparaiso University; BS in Health Arts, College of St. Francis; MS in Nursing, Purdue University-Calumet; RN

Mann, Amy E., Program Chair and Master Instructor, Reading, Basic Skills Advancement

BA in English Literature, University of Pennsylvania; MS in Educational Psychology; M Ed in Education-Reading, Texas A&M University

McPhail, David D, Business Division Chair and Senior Instructor, Business Administration

BS in Business Administration, University of Southern Colorado; MA in Procurement and Acquisitions Management, Webster University

Metcalf, Linda J., Program Chair and Master Instructor, Business Administration

BS in Education, Miami University; M Ed in Education, University of Cincinnati

Miller, Jolene K., Health and Human Services Division Chair and Master Instructor

AS in Respiratory Therapy, University of Southern Indiana; BS in Health Arts, College of St. Francis; MS in Education in Instructional Research and Design, Purdue University; RRT; CRTT

Mitchell, Brenda M., Master Instructor, Surgical Technology

Technical Certificate in Operating Room Technician, St. Elizabeth School of Nursing; AAS in Industrial Education, Purdue University; BS in Allied Health Education or Health Services, Indiana University - Purdue University at Indianapolis; CTS

Moore, Teresa G., Coordinator and Senior Instructor, English/Communications

B.A. in English, MA in English, Western Kentucky University

Nance, Dennis A., Program Chair and Master Instructor, Industrial Technology/ Welding

Technical Certificate in Industrial Technology, AAS in Industrial Technology, Ivy Tech State College; BA in Vocational Technical Education, Southwestern University; CWI

Nice, Anna, Instructor, Practical Nursing

AAS in Nursing, Purdue University; BS in Nursing, Purdue University; RN

Peigh, Kathleen M., Coordinator and Senior Instructor, Mathematics

BS in Mathematics Education, Indiana State University; MS in Mathematics, Indiana State University

Prater, Barbara G., General Education and Support Services Division Chair and Senior Instructor, Chemistry

BA in Chemistry and Mathematics, University of Kansas; PhD in Physical Chemistry, University of Texas at Austin

Roberson, Glen, Program Chair and Instructor, Automotive Technology/Auto Service

AS in Mechanical Engineering Technology, Purdue University; AS in Manufacturing Technology, Ball State University; BS in Mechanical Engineering Technology, Purdue University; ASE Certified

Robinson, Diann L., Mathematics Coordinator and Instructor, Basic Skills Advancement

BA in Elementary Education, MS in Education, Purdue University

Rossmanith, Mark A., Program Chair, Instructor in Industrial Technology / Heating, Ventilation, and Air Conditioning

Certificate in Air Conditioning Heating & Refrigeration, Orlando Technical Center; BS in Business Administration, Indiana State University

Shelley, Suzanne, Director of Clinical Education and Instructor, Respiratory Care

AAS in Respiratory Therapy, Southern Maine Technical College; BS in Respiratory Therapy, Thomas Edison State College

Smith, Elaine E., Instructor in Practical Nursing

BS in Nursing, Purdue University; RN

Smith, James G., Program Chair, Master Instructor in Electronics Technology

AAS in Electronic Technology, BS in Electronic Technology, University of Toledo; MS in Electronic Technology, Western Michigan University

Smock, Warren W., Program Chair, Senior Instructor in Accounting

BS in Business Administration, University of Indianapolis; MBA, Indiana Wesleyan University

Spencer, Doris M., Master Instructor in Practical Nursing

BS in Nursing, Indiana University; MS in Counseling/Personnel, Purdue University; RN

Thompson, Robert D., Program Chair, Master Instructor in Automotive Technology/Auto Body Repair

Technical Certificate, Nashville Auto Diesel College; ASE Certified Mechanic

Whitesel, Joel A., Program Chair, Senior Instructor in Office Administration

BS in Business Education, MBA in Business Administration, Ball State University

REGION 5

OFFICERS

Lutz, Carl, Vice President/Chancellor

BS in Engineering, Michigan State University; MS in Engineering, PhD in Engineering, Carnegie-Mellon University

Daily, Steven J., Executive Dean

BS in English, MS in Education, Indiana University-Kokomo

Guthrie, Pamella, Site Director of Wabash Center

BA in Education, Lowell State College

Stiffler, David, Director of Logansport Campus

BS in Business Administration, Troy State University; MPA in Public Administration, EdD in Education, Ball State University

Kellar, Ruth, Director of Instruction

BA in Sociology, University of Colorado; MS in Education, Indiana University

FACULTY

Anderson, Donald, Instructor in General Education, Kokomo

BS in Chemistry and Math, Wisconsin State College; BS in Biology, PhD in Botany and Plant Pathology, Purdue University

Baty, David E., Master Instructor, Program Chair in Accounting, Kokomo

BS in Business Administration, MA in Accounting, Ball State University

Brehmer, Denise M., Instructor in Practical Nursing, Kokomo

AS in Nursing, Indiana University - Kokomo; BS in Nursing, Ball State University; RN

Coon, Christina, Instructor in Accounting, Logansport

BS in Accounting, Indiana University

DeFazio, Joseph M., Senior Instructor, Program Chair in Computer Information Systems, Kokomo

BS in Applied Computing, MS in Electronics and Computer Technology, Indiana State University

Groves, Rhonda K., Master Instructor, Program Chair in Office Administration, Kokomo

BS in Business Education, MA in Business Education, Ball State University

Hall, Larry R., Instructor, Program Chair in Automotive Technology, Kokomo

AAS in Auto Service, Ivy Tech State College

Harris, Phylliss, Master Instructor, Program Chair in Office Administration, Kokomo

BS in Business Administration, Ball State University

Hayes, David, Instructor in Computer Information Systems, Wabash

BS in History, MS in Information and Communication Science, Ball State University

Hockney, Daniel W., Master Instructor, Division Chair in Business, Kokomo

BS in English, MA in American History, Ball State University

Hughes, Montevan, Instructor in Computer Information Systems, Logansport

BS in Psychology, MS in Information and Communication Science, Ball State University

Jackson, Rita, Instructor, Program Chair in General Education, Kokomo

BS in Mathematics, MA in Mathematics, Purdue University

Jun, Benjamin, Instructor, Program Chair in Electronics Technology, Kokomo

BS in Mechanical Engineering and in Electrical Enginering, Seattle University; MS and PhD in Electrical Engineering, Purdue University

KING, KIM, Instructor in General Education, Kokomo

BS in Speech Communications, University of Indianapolis; MS in Speech Communications, Ball State University

KOCH, JEAN, Senior Instructor, Computer Information Systems, Kokomo

AAS in Computer Programming, Ivy Tech State College; BS in Education, Ball State University

LAGRAVE, STEVE E., Senior Instructor, Program Chair in Business Administration, Kokomo

BS in Business, Indiana University-Purdue University-Indianapolis; MA in Executive Development, Ball State University

LEWIS, PAMELA J., Master Instructor, Division Chair in General Education and Support Services, Kokomo

BS in Education, Indiana University; MA in Adult Education, Ball State University

LOCKE, CHERYL L., Assistant Instructor in Basic Skills, Kokomo

BS in Education, Indiana University; MA in Adult Education, Ball State University

MARTIN, SHARENE A., Instructor in Basic Skills, Kokomo

BS in Education, Indiana University

MOONEY, GERRY, Senior Instructor, Program Chair in Practical Nursing, Kokomo

BS in Nursing, Indiana University; MA in Executive Development, Ball State University; RN

MORGAN, CONNIE, Senior Instructor, Program Chair in Medical Assistant, Kokomo

BS in Nursing, MA in Education, Indiana Wesleyan University; RN; CMA

PETERS, LAURIE F., Instructor in Practical Nursing, Kokomo

BS in Nursing, Indiana University-Kokomo; RN

PRITCHETT, JOHN E., Senior Instructor, Program Chair in Construction Technology, Kokomo

AS in Design Drafting, Linn Technical College

ROWE, SANDRA A., Senior Instructor in Basic Skills, Kokomo

BS in Voc./Home Economics, MA in Education, Ball State University

SCHAFFHAUSEN, DONNA M., Assistant Instructor in Basic Skills, Logansport

BS in French/Math, St Cloud State University; MA in Adult Education, Ball State University

SCHICK, DONALD E., Instructor in Industrial Technology, Kokomo

SHANK, BRAD, Instructor in Computer Information Systems, Kokomo

BS in Industrial Technology, Purdue University; MA in Computer Science, Ball State University

SHIVELY, MARSHA L., Senior Instructor in Basic Skills, Kokomo

BS in Secondary Education, MA in English, PhD in English, EdD in Education Administration, Ball State University

SLUSHER, PATRICIA, Instructor in Medical Assisting, Kokomo

AS in Organizational Leadership, Purdue University; BS in Medical Technology, Indiana University-Kokomo

THURMOND, BRADLEY H., Instructor in Basic Skills, Kokomo

BS in Psychology/English, Purdue University

TURNPAUGH, VEARL D., Senior Instructor, Division Chair in Technology, Kokomo

BS in Computer Integrated Manufacturing Technology, MS in Industrial Technology, Purdue University; Certified Manufacturing Technologist; SME

WARD, DAN, Instructor, Program Chair in Design Technology, Kokomo

BS in Technical Graphics, Purdue University

WILSON, JANE, Senior Instructor, Program Chair in Basic Skills, Kokomo

BS in Education, MA in American History, Ball State University

REGION 6

OFFICERS

JEFFS, ROB, Chancellor

BA in Biology, Olivet Nazarene College; MA in Industrial Arts, Ball State University; PhD in Educational Administration, Indiana State University

VOELZ, JACK, Executive Dean, Anderson

BS in Business Education, MA in Business Education, Ball State University

EBERLE, CAROL, Regional Dean of Instruction

BS in Sociology, Oklahoma State University; MS in Secondary Education, Southern Illinois University, Edwardsville; PhD in Administration, Curriculum and Instruction, University of Nebraska-Lincoln

HOCHSTETLER, JAY, Site Director, Marion

BS in Business Management, Goshen College: MBA, Indiana University; EdD, Ball State University

FACULTY

ANTHONY, NEIL, Instructor in Physics and Physical Science, Muncie

BS in General Arts - Physics and Chemistry, MA in Secondary Education, MA in Computer Science, Ball State University

BARRETT, PAUL WM., Division Chair, Master Instructor in Business, Muncie

BS in Political Science, MPA in Public Administration, Ball State University

BARDONNER, STEVE, Program Chair, Instructor in Design Technology, Muncie

AAS in Architectural Drafting and Design, Ivy Tech State College; BS in Industrial Arts Education and Technology, Ball State University

BISHOP, DANNA, Regional Program Chair, Instructor in Office Administration, Marion

BS in Business Education, Indiana State University; MAE in Education, Indiana Wesleyan University

BRINKLEY, HAROLD, Instructor in HVAC, Muncie

AAS in Heating/Air Conditioning/Refrigeration, AAS in Building Construction, Ivy Tech State College, BS in Business Management, Indiana Wesleyan University

BURDEN, MARSHA, Instructor in Practical Nursing, Muncie

BSN, Anderson University

CLAMME, ROBIN G., Senior Instructor in Basic Skills Advancement, Muncie

BA in Education, Arizona State University; MA in Adult Education, Ball State University

FOX, MELINDA J., Program Chair, Senior Instructor in Mathematics, Muncie

BS in Mathematics, MS in Mathematics, Indiana State University

GADDIS, DENNIS L., Division Chair, Master Instructor in Technology, Muncie

Certificate, Lincoln Technical Institute; BS in Industrial Education, Purdue University; MA in Public Relations, Ball State University

GASKILL, FRED, Program Chair, Instructor in Human Services, Muncie

BS in Psychological Science, MA in Educational Psychology, Ball State University

GILBERT, LARRY A., Senior Instructor in General Education and Basic Skills Advancement, Marion

AB in French/Education, Anderson University; MA in French, Ball State University

GREENAN, MARY L., Senior Instructor in Basic Skills Advancement, Anderson

BS in Education, University of Maine; MS in Education, Butler University

GRIFFIN, OBRIN, Regional Department Chair, Instructor in Electronics, Anderson

BS in Electrical Engineering, University of Sierra Leone; MSEE in Electrical Engineering, University of Evansville

Guzdial, Stephen C., Regional Department Chair, Master Instructor in Automotive Technology and Auto Body, Muncie

BS in Mechanical/Engineering Technology, Western Michigan University; MA in Adult Education, Ball State University

Hamilton, Betty L., Program Chair, Senior Instructor in Physical Therapist Assistant, Muncie

BS in Physical Therapy, Washington University; PhD in Medical Sciences, University of Nebraska

Hartig, David A., Regional Program Chair, Master Instructor in Construction Technology, Muncie

AAS in Printing, Western Wisconsin Technical Institute; BS in Technical Education, University of Wisconsin - Stout

Helm, Jeffrey, Instructor, Computer Information Systems, Anderson

BS in Criminal Justice; MS in Information and Communication Sciences, Ball State University

Hiday, Mary, Instructor in Practical Nursing, Muncie

AD in Nursing, Anderson College; BSN, Anderson University

Hobbs, Lori K., Instructor in Physical Therapist Assistant, Muncie

AS in Physical Therapist Assistant, Oklahoma City Community College; BS in Physical Therapy, Indiana University

Hoffman, Nancy J., Program Chair, Senior Instructor in Child Development, Muncie

BS in Home Economics, Penn State University; MA in Early Childhood Education, EdD, Ball State University

Jackson, Cynthia G., Senior Instructor in Computer Information Systems, Muncie

BS in Computer Science, MS in Information/Communication Sciences, Ball State University

Johnson, Karen, Regional Program Chair, Master Instructor in Accounting, Muncie

BS in Business Administration, Ferris State University; MBA, Indiana Wesleyan University

Jones, Patrick M., Regional Department Chair in Industrial Technology, Muncie

AAS in Electronics Technology, Ivy Tech State College; BS in Education, Taylor University; MA in Vocational Education/Industrial Technology, Ball State University

Keller, Teresa G., Master Instructor in Office Administration, Anderson

BS in Marketing and Education, MAE in Adult Education, Ball State University

Kerr, Marilyn K., Regional Program Chair, Senior Instructor in Business Administration, Anderson

BS in Education, MBA, Ball State University

Kleeberg, Michael, Program Chair, Instructor in English/Communications, Muncie

BA in English and Writing, Kean College of New Jersey; MA in English and Composition, Ball State University

Lightfoot, Connie D., Regional Program Chair, Senior Instructor in Computer Information Systems, Marion

BS in Mathematics, Taylor University; MA in Computer Science, EdD in Educational Administration, Ball State University

Mays, Mark D., Senior Instructor in Basic Skills Advancement, Muncie

BA in Elementary Education, Ball State University

McDaniel, Kathleen, Instructor in Medical Assistant, Anderson

BA in English, Loyola University; MA in Special Education, Ball State University

Outland, Dan K., Senior Instructor in Accounting and Business Administration, Marion

BBA in Marketing, Memphis State University; MBA in Business Administration, Ball State University

Pippin, Donald L., Senior Instructor in Computer Information Systems, Muncie

BS in Education, MA in Business Education, Ball State University

Pruitt, Linda K., Instructor in Medical Assistant, Marion

BS in Business Administration, MBA in Business Administration, Indiana Wesleyan University

Ransbottom, Greda, Department Chair, Instructor in Medical Assistant Program, Anderson

BS in Health Education, Martin University; CRRT; RRT; MA in Health Science, Ball State University

Roberts, Barbara, Instructor in Medical Assistant, Muncie

BA in Health, Anderson University; MS in Education, St. Francis College

Russel, J. Phillip, Senior Instructor in Industrial Technology, Muncie

AAS in Machine Tool, Ivy Tech State College; BS in Business, Indiana Wesleyan University

Sipe, Betty, Program Chair, Senior Instructor in Life Sciences, Anderson

BS in Biology, Lenoir Rhyne College; MA in Biology, MA in Health Education; EdD in Science Education, Ball State University

Sloan, Max L., Instructor in Basic Skills Advancement, Muncie

BS in Mathematics, Ball State University

Stoops, Sharon, Division Chair, Master Instructor in General Education and Support Services, Muncie

BS in English, MAE in Education, Ball State University

Swain, Richard, Senior Instructor in Mathematics, Anderson

BS in Mathematics, Ball State University; MS in Mathematics, Miami University

Warner, John, Instructor in Construction Technology, Muncie

BA in Religion and Fine Art, Anderson University; MA in Art Education, Ball State University

Warren, John, Division Chair, Master Instructor in Health and Human Services, Muncie

BA in Psychology, Southern Illinois University; MA in Biological Sciences, Northeast Missouri State University; PhD in Applied Health Science, Indiana University

Whisler, Vesta R., Senior Instructor in Computer Information Systems, Muncie

BS in Business Education, MAE in Adult Education, Ball State University

Woodard, Catherine, Program Chair, Master Instructor in Practical Nursing, Muncie

BSN, Ball State University; MSM, Indiana Wesleyan

REGION 7

OFFICERS

Borden, Sam, Vice President/Chancellor

BS in Education, MS in Education, PhD in Educational Administration, Indiana State University

Cottrell, Norma, Director of Instruction

BS in Medical Technology, MS in Vocational Technical Education, Indiana State University

FACULTY

Alsman, Cathy, Instructor, Program Chair in Human Services, Terre Haute

BS in Psychology, MS in Educational Psychology, Indiana State University

Alsman, Roddy L., Instructor, Program Chair in Industrial Technology, Hulman Regional Airport

BS in Industrial Technology, MS in Industrial Professional Technology, Indiana State University

Arney, Donald D., Master Instructor, Instructional Chair, Program Chair in Manufacturing Technology, Terre Haute

BS in Vocational Trade Industrial Technology, MS in Industrial Professional Technology, Indiana State University; Certified Senior Industrial Technologist; SME

Barcus, Becky A., Senior Instructor in Medical Assistant, Terre Haute

BS in Elementary Education, Indiana State University; RN; BS in Nursing, University of Evansville

Behringer, Debra M., Instructor in Practical Nursing, Terre Haute

BSN, University of Michigan/Flint; RN

Berrisford, Richard K., Instructor in Industrial Technology, Terre Haute

Indiana Vocational Teaching License Certificate

Boesen, Melanie M., Senior Instructor in Office Administration, Terre Haute

BS in Business Education and Administrative Systems, MS in Human Resource Development, Indiana State University

Bolinger, Bonnie S., Instructor in Business Administration, Terre Haute

BS in Marketing, MBA, Indiana State University

Brown, Mary K., Senior Instructor in Practical Nursing, Terre Haute

AS in Nursing, BSN, Indiana State University; RN

Brownfield, Floyd P., Instructor in Industrial Technology, Hulman Regional Airport

Plumber/Journeyman

Byers, John P., Senior Instructor in Electronics, Terre Haute

AAS in Communications and Electronics, Ivy Tech State College; BA in Physics, Wabash College

Cantrell, Ladeena J., Instructor in Practical Nursing, Terre Haute

AS in Nursing, BSN, Indiana State University; RN

Caton, Janet K., Instructor, Program Chair in Quality Science, Terre Haute

BS in General Science Teaching, Indiana State University

Chalos, P. Pete, Instructor in Business and Industry Training, Hulman Regional Airport

BS Physical Education and History; MS in Adminstration, Indiana State University

Chaney, Mary Catherine, Program Chair in Visual Communications, Terre Haute

BA in Education, St. Mary of the Woods College, MS in Elementary Education, Indiana State University

Crist, Donald R., Instructor and Program Chair in Barbering, Licensed Barberer and Barbering Instructor

Crooks, Lea A., Instructor in Business and Industry Training, Hulman Regional Airport

BS in Business Education, Indiana State University

Deisher, Ronald D., Senior Instructor, Program Chair in Accounting, Terre Haute

BS in Business Administration and Marketing, MBA, Indiana State University

Dunford, Eldon L., Instructor in Business and Industry Training, Hulman Regional Airport

Mine Safety and Health Administration Certified Instructor

Ehm, Leota A., Master Instructor, Program Chair in Practical Nursing, Terre Haute

BSN, University of Colorado; MS in Vocational Technical Education, Indiana State University; RN

Ekstrom, Peter T., Senior Instructor in English and Humanities, Terre Haute

BS in Music Education, MA in Education/Guidance and Counseling, University of Michigan

Fagg, Fred E., Instructor, College Industry Job Title Training Program

Farris, Roger D., Instructor, Program Chair in Aircraft Maintenance Technology, Hulman Regional Airport

BA in English, University Southeast; Airframe and Powerplant Certified

Gambill, Janee B., Senior Instructor, Program Chair in Medical Laboratory Technology, Terre Haute

BS in Medical Technology, MS in Life Science, Indiana State University; MT; CLS

Garner, John A., Instructor, Program Chair in Radiology, Terre Haute

BS in Physics and Science Education, Indiana State University; RT

Goode, Rena E., Instructor in Medical Laboratory Technology, Terre Haute

BA in Biology, Greenville College

Good, Anson G., Senior Instructor in Automotive Technology, Terre Haute

BS in Industrial Arts, MS in Vocational Education, Indiana State University

Gosnell, Kelly J., Instructor, Practical Nursing, Terre Haute

AS in Nursing, BSN, Indiana State University

Graham, Jeanne A., Senior Instructor in English and Humanities, Terre Haute

BS in English, Indiana University; MA in English, Indiana State University

Harmless, Malcolm D., Instructor, Program Chair in Electronics, Terre Haute

AAS in Industrial Electronics, AAS in Communications Electronics, AAS in Telecommunications Electronics, Ivy Tech State College; BS in Electronic Technology, Indiana State University

Hart, Glenda B., Senior Instructor, Instructional Chair/Program Chair in Office Administration, Terre Haute

BS in Business Education; MS in Human Resource Management, Indiana State University

Henson, Joseph, Instructor in Aircraft Maintenance Technology, Terre Haute

BS in Business Education, MS in Human Resource Management, Indiana State University

High, Lili L., Senior Instructor in Business and Industry Training, Hulman Regional Airport

BS in Child Development, Indiana State University; MA in Management and Supervision: Public Administration, Central Michigan University

Hofmann, Beulah A., Senior Instructor in Practical Nursing, Terre Haute

BSN, MS in Nursing, Indiana State University; RN

Jones, Marsha K., Instructor in Medical Laboratory Technology, Terre Haute

BS in Medical Technology, MS in Life Science, Indiana State University

Jones, Robert L., Senior Instructor in Science and Mathematics, Terre Haute

BS in Civil Engineering, Purdue University

Kidd-Marshall, Renee J., Instructor in Practical Nursing, Terre Haute

BSN in Nursing, McKendree College

Kincaid, Lisa R., Instructor in Practical Nursing, Greencastle

BSN in Nursing, University of Indianapolis

King, Deanna L., Instructor in Accounting, Terre Haute

BS in Operations Management, Indiana University; MBA, Indiana State University; CPA

Lawson, James D., Senior Instructor in Manufacturing Technology, Terre Haute

BS in Vocational Trade Technology, Indiana State University

LUMSDON, DONALD R., Senior Instructor, Program Chair in Automotive Technology, Terre Haute

BS in Automotive Technology, Indiana State University; ASE Master Technician

MCKINLEY, SUE E., Senior Instructor in Practical Nursing, Terre Haute

BS in Vocational Trade Industrial Technology, Indiana State University

METCALF, MARION D., Instructor in Business and Industry Training, Hulman Regional Airport

BS in Personnel and Organizational Behavior, MBA in Personnel and Organizational Behavior, Indiana State University

MURRAY, ROBERT J., Master Instructor in Computer Information Systems, Terre Haute

BA in Mathematics and Religion, MS in Education, Butler University

PAGE-BLACK, KAREN, Instructor in Visual Communications, Terre Haute

BS in Physical Education, Hardin-Simmons University; MS in Physical Education, Indiana State University

RASLEY, JAMES R., Senior Instructor in Computer Information Systems, Terre Haute

AAS in Computer Programming, Ivy Tech State College; BS in Computer Information Systems, Pacific Western University

REED, REGINA A , Instructor in Practical Nursing, Greencastle

BSN in Nursing, St. Louis University; RN

RUTHERFORD, JOHN W., Senior Instructor in Computer Information Systems, Hulman Regional Airport

BS in Agriculture, MS in Agriculture Extension Education, Purdue University

SCHROEDER, KENNETH C., Senior Instructor, Program Chair in Computer Information Systems, Terre Haute

AAS in Computer Programming, Ivy Tech State College; BS in Mathematics, Indiana State University

SHOTWELL, ROBERT A., Senior Instructor, Instructional Chair, Program Chair in Science and Mathematics, Terre Haute

BS in Physics, Rose-Hulman Institute of Technology; MS in Physics, Indiana State University

SLYH, KATHLEEN, L., Instructor in Practical Nursing, Terre Haute

BSN, University of Cincinnati

SMITH, MARGIE F., Instructor in Practical Nursing, Greencastle

BSN, Evansville College

STOLFE, MICHAEL L., Master Instructor, Program Chair in Design Technology, Terre Haute

BS in Geography, MA in Departmental Curriculum in Geography, Indiana State University

STROLE, KAREN R., Senior Instructor in Practical Nursing, Terre Haute

BS in Nursing, Indiana State University; RN

STULTZ, LESLIE A., Senior Instructor, Program Chair in General Education and Humanities, Terre Haute

BS in Speech Communication, MS in Secondary School Teaching of English and Speech, Indiana State University

SUMMERS, PATRICIA A., Senior Instructor in English and Humanities, Terre Haute

BS in Elementary Education, Southern Illinois University

SWANK, DENISE J., Instructor in Radiology, Terre Haute

AAS in Radiologic Technology, Ivy Tech State College

TROUT, JANET L., Senior Instructor and Program Chair in Business Administration, Terre Haute

BS in Economics, Indiana State University, MBA in Business Administration, Indiana Wesleyan

WALTERMIRE, PATRICIA A., Senior Instructor in Science and Mathematics, Terre Haute

MLS in Library Science, Indiana State University

WEBSTER, JANICE, Senior Instructor in Quality Science, Terre Haute

BS in Life Science, MA in Life Science, Indiana State University

WHITE, LORETTA L., Senior Instructor, Program Chair in Practical Nursing, Greencastle

BSN, MS in Nursing, Indiana State University

REGION 8

OFFICERS

CARTER, MEREDITH, Vice President/Chancellor

BS in Biology and Education, MS in Educational Administration, Butler University; PhD in Educational Administration, Ball State University

COOKE, THOMAS C., Dean of Instruction

AB in Psychology, Dickinson College; M Div, United Theological Seminary; STM in Counseling, Temple University; EdD in Industrial Education, Pennsylvania State University

FACULTY

ALFREY, DUANE, Senior Instructor in Industrial Technology

Technical Certificate in Welding Technology, Ivy Tech State College; BS in Industrial Engineering, Columbia State University

ALTMAN, SUSAN, Instructor, Chair in Paralegal

BA in Political Science/Legal Assisting, MA in Political Science, Eastern Kentucky University; J.D., University of Louisville

BAUMER, MARGARET, Instructor in Office Administration

AS in Business, Miami Jacobs Junior College of Business; BS in Business and Vocational Education, University of Cincinnati; MS in Business Education, Indiana University

BENNETT, DIANA, Master Instructor, Assistant Division Chair in Health and Human Services

BSN, MA in Teaching, DePauw University

BIZUNEH, MOGES, Senior Instructor in Anatomy/Physiology

BS in Public Health, Haile Sallassie University; MS in Biology, Cornell University; PhD in Anatomy, Indiana University

BODIE, CAROL, Instructor in Practical Nursing

Diploma in Nursing, St. Anthony's School of Nursing; BS in Nursing, St. Mary-of-the-Woods

BOLINGER, CONNIE, Master Instructor in Mathematics

BA in Mathematics, DePauw University; MAT in Mathematics, Purdue University

BOLINGER, THOMAS, Instructor in Business and Economics

BA in Mathematics, Butler University; MBA in Business Economics and Public Policy, Indiana University

BRIDGEWATER, RANDALL, Instructor in Automotive

A.S.E., Master Technician

CALVAIN, HUEY, Senior Instructor in Industrial Technology

Certified Senior Industrial Technologist

CINKOSKE, BERNADETTE, Senior Instructor in Computer Information Systems

BA in Mathematics, Indiana University

CLARKSON, CHERYL, Instructor in Practical Nursing

BSN, Indiana University; MSN in Clinical Nursing Specialist, Ball State University

CLIPPINGER, W. MICHAEL, Master Instructor, Division Chair in General Education and Support Services

BA in English, MA in English, Indiana University

DALZELL, JANE, Senior Instructor, Chair in General Technical Studies

BA in English, University of Indianapolis; MS in Secondary Education: English and Reading, Butler University

Daugherty, Marvin, Master Instructor, Chair in Computer Information Systems

AAS in Computer Programing, Ivy Tech State College; BS in Computer Technology, Martin University; MS in Human Resource Development, Indiana State University

Deady, Barbara, Master Instructor, Chair in Practical Nursing

BS in Nursing, Indiana State University; MS in Education, Indiana University; RN, Union Hospital School of Nursing

DeBourbon, Michael, Master Instructor, Assistant Division Chair in Business and Technology

BS in Education, Southern Illinois University; MS in Vocational Education, Indiana University

Dellenbach, Walter, Instructor in Design Technology

AS; BS in Fire Science, Purdue University

DeNoon, Leigh Hightower, Instructor in Nursing

BSN, Washington University; MA, University of Evansville; MSN, Indiana University

Drown, Margaret, Instructor in Radiologic Technology

AS in Radiologic Technology, BS in Health Sciences Education, Indiana University; MS in Instructional Research and Design, Purdue University; RT; RN

Dunkle, Robert, Instructor in Social Sciences

BA in Psychology, Parsons College; MS in Sociology, PhD in Anthropology, Purdue University

Finney, Ronald, Senior Instructor, Chair in Automotive Technology

BS in Finance, Indiana University; ASE - Master Certified Technician; Certified Senior Industrial Technologist-NAIT

Flanigan, William T , Instructor, Chair in Industrial Technology

BS in Aeronautical Engineering, Tri-State University; MS in Management, Indiana Wesleyan University

Fluharty, Linda, Instructor in Nursing

BSN, University of Evansville; MSN, Indiana University-Purdue University at Indianapolis

Gorsline, Michael, Senior Instructor in Mathematics

BA in Mathematics, Indiana University - South Bend; MA in Mathematics, Ball State University

Gray, Harry E., Instructor in Accounting

BS in Business Administration, Butler University; CPA

Hall, Michael, Senior Instructor in Computer Information Systems

BS in Engineering, MS in Engineering, Purdue University; Licensed Professional Engineer; Certified Netware Instructor, Microsoft Certified Trainer

Hamilton, Marilyn, Master Instructor, Chair in Mathematics

BS in Mathematics, Purdue University; MS in Education, Butler University

Harding, Derrick, Instructor in ESL/Developmental/English

BA in Liberal Arts, College of Wooster; MA in Foreign Language Education, Indiana University; TESOL Certification, Indiana University

Haver, Wanda, Instructor, Chair in Surgical Technology

BS in Allied Health Education, Martin University; CST

Head, Joanna, Senior Instructor in Office Administration

BS in Business Education, MS in Guidance, Butler University

Heefner, Alison, G., Instructor in Nursing

BSN, Purdue University; MSN, Indiana State University

Hiday, Rebecca, Instructor, Resource Center

BS in Teacher Education - Special Education - Hearing Impaired, Ball State University; MS in Special Education - Learning Disabilities, Indiana University

Hill, Ann, Instructor in Practical Nursing

BSN, St. Louis University; MS Ed in Health Occupations Education, Indiana University

Hollenberg, Krista, Instructor in Paralegal

BA in Religion and Philosophy, Manchester College; MA in Philosophy of Science, MA in Physical Geography, JD, Indiana University

Hollowell, Ronald, Senior Instructor, Chair of English

BS in English, University of Indianapolis; MA in Secondary Education, EdD in Secondary Education, Indiana University

Hoskins, Larry E., Instructor, Chair in Public Safety

AAS in Fire Science, Ivy Tech State College; BS in Fire Service Administration, Southern Illinois University

Imel, Janet, Senior Instructor, Chair in Child Development

BS in Education, MS in Education, Ball State University

Irwin, James W., Instructor in Industrial Technology

AAS in Heating, Ventilation, and Air Conditioning, Ivy Tech State College; BS in Business Management and Administration, Martin University

Jablonski-Polk, Teresa, Senior Instructor, Chair in Human Services

BA in Social Work, University of Kentucky; MSW, Washington University

Kavanagh, Kay, Master Instructor in Radiologic Technology

BA in Biology, Marian College; MS in Allied Health Education, Indiana University; RT; RN

Keck, Robert, Master Instructor in Science

BS in Biophysics, University of Southern Indiana; MS in Science Education, Indiana State University; MS in Health Service Administration, College of St. Francis

King, Kenneth, Master Instructor in Mathematics

AB in Mathematics, MS in Education, Indiana University; Certificate in Meteorology, St. Louis University

Kinkade, Vincent, Instructor, Chair in Hospitality Administration

AAS in Culinary Arts, Ivy Tech State College; AOS in Culinary Arts, New England Culinary Institute; BA in Business Administration, Hanover College; MS in Business Administration, University of Indianapolis

Koller, Angela, Instructor in Practical Nursing

BSN, Purdue University

Kramer, Janet, Senior Instructor, Chair in Nursing

BSN, Ursuline College; MSN, University of Akron

Kuchler, Stephen, Senior Instructor in Electronics Technology

AAS in Electronics Technology, BS in Industrial Education, Purdue University; MS in Adult Education, Indiana University

Lee, Kathleen, Senior Instructor, Chair in Respiratory Care

AS in Respiratory Care, Indiana University; BS in Biology and Secondary Education, Muskingun College; MS in Adult Education, Indiana University; RRT; RCP

Leigh, Gregory, Instructor in Computer Information Systems

BS in Accounting, MS in Adult Education, Indiana University

Leverette, Debra, Instructor, Chair in Office Administration

BS in Business Education, Ball State University; MS in Business Education, Indiana University

Lotfi, Ali, Instructor, Manager of Student Academic Support Services

BA in Journalism, Tehran University; MS in Education, Indiana University

Loureiro, Ann, Instructor in Nursing

BSN, Indiana University; MA in Nursing, Ball State University

Magnant, Peter, Master Instructor, Division Chair in Health and Human Services

AA in Nursing, BS in Allied Health Education, Indiana University; BA in Philosophy, St. Mary's College; MS in Allied Health Education, EdD in Occupational Education, Indiana University

Meek, Mary, Instructor in Nursing

LPN, Indianapolis Public Schools, School of Practical Nursing; ASN, University of Indianapolis; BSN, MS, Ball State University

Miller, David E., Master Instructor in Mathematics and Electronics Technology

BS in Mathematics, Purdue University; MS in Mathematics, Indiana State University

Miller, Susan, Senior Instructor in Developmental Reading

BS in Elementary Education, MS in Instructional Systems Technology, Indiana University

Moman, Frank, Instructor in Computer Information Systems

BS in Math, Murray State University; MS in Business Management and Administration, Oakland City University

Murphy, Todd, Instructor in Developmental Sciences

BS in Elementary Education, MS in Instructional Systems Technology, Indiana University

Nealon, Raymond, Instructor, Assistant Chair in Business and Technology Division

BS in Business Administration, St. Lawrence University; MS in Management Science, Indiana Wesleyan University

Niebauer, Daniel, Instructor in Automotive Service Technology

ASE Master Certified Technician

Noe, J. Stephen, Instructor in Sciences

BS in Biological Sciences, University of Notre Dame; MS in Zoology, Illinois State University

O'Haver, Michael P., Instructor in Automotive Service Technology

ASE Master Certified Technician

Parham, Beverly, Master Instructor in Practical Nursing

ASN, University of Indianapolis; BS in Elementary Education, Oklahoma State University; MS in Education, Indiana University

Pettit, James, Instructor in Industrial Technology

BS in Education, Martin University

Realey, Anne, Instructor in Practical Nursing

BSN, MSN, Indiana University; RN

Reeder, Jereld, Instructor, Chair in Electronics Technology

BSEE in Electrical Engineering, University of Iowa; MSEE in Electrical Engineering, Purdue University

Reklau, Mary, Instructor in Nursing

ASN, Staten Island Community College; BSN, MSN, Indiana University

Rice, Kathleen, Senior Instructor in Developmental Writing

BA in English, MS in Secondary English Education, Indiana University - Purdue University at Indianapolis

Rowland, Alan, Senior Instructor in Computer Information Systems

BS in Political Science, MA in Adult Education, Ball State University

Rusu, Lucia, Senior Instructor, Chair of Science

BS in Physics, University Babes - Bolyai, Romania; MS in Physics, Purdue University

Scott, Linda L., Master Instructor, Chair in Accounting

AAS in Business Education, BS in Business Education, MA in Education, Ball State University

Sensenbrenner, Owen Lee, Instructor in Industrial Technology

BS in Automotive Technology, MS in Industrial Technology, Indiana State University

Sharon, Stephen, Instructor in Industrial Technology

BS in Mechanical Engineering, Purdue University; MS in Industrial Engineering, Iowa State University; Ed.D., Nova Southeastern University

Shirzadi, Simin, Senior Instructor, Chair of Social Science

BA in Communications, MA in Educational Leadership Administration and Higher Education, EdS in Educational Leadership Administration and Higher Education, Western Michigan University; Ed.D., Nova Southeastern University

Simpson, Leslie Philip, Instructor in Electronics Technology

BA-BOG, Eastern Illinois University; JD, Indiana University; Certified Senior Industrial Technologist NAIT; Chief Examiner, FCC Commercial Radio Services

Smith, Janet, Instructor in Practical Nursing

BS in Nursing, Indiana University

Snare, Leroy, Senior Instructor in Mathematics, Physics

BA in Physics and Mathematics, University of Missouri - Kansas City; MS in Aeronautics, Massachusetts Institute of Technology; MS in Physics, University of Missouri - Columbia

Sparzo, Darrel S., Instructor in Computer Information Systems

BA in Computer Science Math, MA in Educational Psychology, Ball State University

Stahl, Bradley, Instructor in Medical Assistant

BS in Communication/Broadcasting Technology, Ball State University; CMA, Methodist Hospital - EMT-P

Stowe, Marcus, Instructor in Respiratory Care

AS in Multi Disciplinary (Child Development Psychology), Indiana University; BS in Education, St. Francis University; RRT; RCP

Strandjord, Janet, Master Instructor in Mathematics

BA in English, University of Illinois; MS in Education, Indiana University

Thomas, Margaret, Instructor in Mathematics

BS in Elementary Education, Winthrop University; MS in Human Resource Development, MS in Science, Indiana State University

Timmons, Deanna S., Master Instructor, Division Chair in Business and Technology

BS in Business Education, University of Indianapolis; MS in Education, Butler University

Troxell, Christy, Instructor, Chair in Occupational Therapy Assistant

BS in Occupational Therapy, University of Illinois; MA in Agency Counseling, Rhode Island College

Trusty, Richard T., Instructor in Design Technology

BS in Industrial Technology, Purdue University; AutoDesk Certified Instructor

Vandivier, Alix, Instructor in Hospitality Administration

BS in Home Economics, MA in Speech/Communication, Texas Technical University

Wallace, Michael, Instructor in Industrial Technology

BA in English Literature, Marian College

Whitfield, Willie, Instructor in Human Services

BA in Clinical Psychology, MS in Clinical Psychology, Alabama A & M University

Wood, Christopher, Master Instructor, Assistant Division Chair in General Education and Support Services

BA in English, MA in English, Indiana University

Wright, Kenton D., Instructor, Coordinator in Design Graphics

BSME in Mechanical Engineering, Purdue University

Wurtz, Robert, Instructor in Design Technology

AS in Architecture Technology, BS in Construction Technology, Purdue University

REGION 9

OFFICERS

Steck, James, Chancellor

BS in Computer and Information Science, MS in Computer and Information Science, Ohio State University

Tincher, Steve, Dean of Instruction

BS in General Business Administration; MA in Accounting, Ball State University

FACULTY

Anderson, Jillene K., Program Chair in Nursing

BS in Nursing, Indiana Wesleyan University; MS in Nursing, Ball State University; RN

Ayton, Eugene G., Program Chair in Business Administration

BS in Business Administration, Morgan State University; MA in Executive Development, Ball State University

Bechtel, Barbara E., Instructor in Practical Nursing

BSN, Indiana University - Bloomington; RN

Berrier, Peggy A , Program Chair in Accounting

Technical Certificate in Business Administration, Sumter Technical College; AAS in Computer Programming, Ivy Tech State College; BS in Accounting, Masters in Business Education, Ball State University; CPA

Bond, Idris A., Program Chair in Medical Assistant

BS in Nursing, Indiana University; RN

Brustkern, Maureen E., Program Chair in Child Development

BS in Elementary Education, Ohio State University; MS in Early Childhood Education, Wright State University

Davidson, James E., Program Chair in Language Arts and Humanities

BA in English, Hillsdale College; MA in Communication Arts, New York Institute of Technology

Frantz, Robert M , Program Chair in Automotive Technology

AAS in Automotive Services, Ivy Tech State College; ASE Master Mechanic; Master Machinist

Friend, Ken S., Department Chair in Industrial and Manufacturing Technology

AAS in Automotive Services, AAS in Machine Tool Technology, Ivy Tech State College; BS in Industrial Technology Education, Indiana State University

Graesser, William M., Division Chair in General Education, Program Chair in Math and Science

BA in Mathematics, Otterbein College; MAT in Mathematics, Webster University

Lewis, Karen K , Instructor in Practical Nursing

BS in Nursing, Ball State University

Martin, David, Program Chair in Construction Technology

AS in Civil Engineering Technology/Construction Management, Cincinnati State Community and Technical College; BS in Construction Management, University of Cincinnati

Rice, Stephanie L., Instructor in Medical Assistant

AS in Nursing, BS in Exercise Physiology, Ball State University

Shinn, Larry L., Program Chair in Office Administration

BS in Business Education, MS in Business Education, EdD in Educational Administration, Ball State University

Terrell, Peggy J., Instructional Affairs Chair in Business and Technology Divisions

BS in Business Education, Indiana State University; MA in Business Education, Ball State University

Thurston, Sheryl L., Instructor in Practical Nursing

BSN, MA in Health Sciences, Ball State University; RN

Tu, James Z., Program Chair in Computer Information Systems

BS in Computer Science, Shanghai Jiaw-Tong University; MS in Mechanical Engineering, PhD in Mechanical Engineering, University of Cincinnati

Ward, Barbara, Instructor in Practical Nursing

AS in Nursing, BS in Nursing, Indiana University East-Richmond

White, Judith A., Instructor in Practical Nursing

Diploma, Bethesda Hospital School of Nursing; BS in Nursing, Earlham College; RN

Williamson, Ruth A , Instructor in Child Development

BS in Elementary Education, Eastern Michigan University; MA in Elementary Education, Ball State University

Wilson, Marc L., Instructor in Language Arts and Humanities

BA in English, MA in Adult and Community Education, Ball State University

Wysong, Vicki A , Instructor in Practical Nursing

AS in Nursing, Ivy Tech State College; BS in Nursing, Indiana University School of Nursing East Campus-Richmond

REGION 10

OFFICERS

Flood, Greg, Executive Dean, Columbus

BS in Radio and Televison, Journalism, and Speech, MA in Journalism and Public Relations, Ball State University

Jordan, Thomas, Executive Dean, Bloomington

BS in Physics, Ohio State University, MEd in Physics and Education, PhD in Educational Administration, Bowling Green State University

Tammone, William, Director of Instructional Affairs, Columbus

BA in Biology, MS in Human Biology, University of Chicago; Ph.D. in History and Philosophy of Science, Indiana University

Sands, Brenda F., Director of Instructional Affairs, Bloomington

BS in Consumer and Family Studies, Education, Manchester College, MA in Secondary Education, MA Ed Adult/Community Education, Ball State University; Education Administration, Purdue University, CTC; CCFS

FACULTY

Adkins, Maxine F., Senior Instructor in General Education and Support Services, Columbus

BA in English, Indiana Central College; MA in Biology, University of Indianapolis

Amstutz, Matthew, Instructor in Industrial Technology, Columbus

BA in Physical Education, Muskingum College

Arnold, Linda, Senior Instructor in Practical Nursing, Bloomington

BS in Nursing, University of Evansville

Barnes, Kirk, Senior Instructor, Program Chair in Design Technology, Bloomington

BS in Industrial Arts Technology Education, MA in Industrial Arts Technology Education, Ball State University

Barnes, Rosalie, Master Instructor, Department Chair of Office and Information Systems, Columbus

BS in Business Education, Eastern Illinois University; MS in Business Education, Indiana University

Bleuer, Caroline Kay, Master Instructor in General Education/Support Services, Columbus

BS in Education, MS in Education, Indiana University, Developmental Education Specialist, Appalachian State University

Canine, Jill, Senior Instructor in Computer Information Systems, Columbus

BA in Business Administration, Hanover College; MA in Computer Science, Ball State University

Carpenter, Lorene, Instructor in Practical Nursing, Columbus

AS in Nursing, Youngstown State University; BS in Nursing, University of North Carolina-Charlotte, RN

Catlin, Alfred, Instructor in Automotive Technology, Columbus

Cline, Vera, Instructor in Nursing, Bloomington

BS in Nursing, MS in Nursing, Indiana State University; RN

Collins, Edith, Master Instructor, Program Chair in Nursing, Bloomington

BS in Nursing, Indiana University; MS in Nursing, Radford University, EdD in Adult Education, Indiana University; RN

Craig, Carolyn J., Instructor, Program Chair in Accounting, Bloomington

BA in French, MBA, Indiana University; CPA

Dawson, Ron A., Senior Instructor, Program Chair in Industrial Technology, Bloomington

BS in Math Education, University of Illinois; MA in Math Education, Eastern Illinois University

DiSilvestro, Ruth, Instructor in Academic Skills Advancement, Bloomington

BA in English, Vanderbilt University; MAT in English, Indiana University

Dorsey, William Kevin, Instructor in General Education, Columbus

BS in Biology, Eastern Kentucky University; MA in Anatomy, Indiana University

Dougherty, Ronald, Master Instructor, Department Chair in Business Administration and Accounting, Columbus

BS in Business Marketing, Indiana University; MS in Management, Indiana Wesleyan University

Duan, Xin-Ran, Senior Instructor in Design Technology, Program Chair of Design and Automotive Technologies, Columbus

BS in Engineering, Xi'an Jiao-tong University; MS in Mechanical Engineering, University of Oklahoma

Farmer, Wendy, Instructor in Nursing, Bloomington

BSN, University of Evansville; RN

Friedman, Susan, Instructor in Business Administration, Bloomington

BA in Economics, Wellesley College; MA in Economics, Western Michigan University; MBA, Arizona State University

Gates, Sharon, Instructor in Nursing, Bloomington

BS in Nursing, Purdue University; MS in Nursing, Indiana University; RN

Gersch, Carolyn, Senior Instructor in Practical Nursing, Bloomington

BS in Nursing, Indiana University; RN

Giles, Carolyn M., Master Instructor in General Education/Support Services, Columbus

BS in Education, MS in Education, Indiana University

Graue, Gregory P., Senior Instructor, Department Chair in General Education/ Support Services, Columbus

BS in Education, BS in Mathematics, MA in Mathematics, Indiana University

Herron, Linda A., Instructor in Medical Assistant, Columbus

AAS in Radiology, Indiana University; BS in Education, Indiana University-Purdue University -Indianapolis; CMA, RT

Holmes, Mary Ann, Instructor in Practical Nursing, Bloomington

BSN, Midwestern State University; RN

Jackson, Robert, Instructor in Accounting, Columbus

BS in Business Administration, MA in Accounting, Bowling Green State University

Lamm, Geneva, Senior Instructor, Department Chair in Health and Human Services, Columbus

TC in Nursing, Indianapolis School of Practical Nursing; AA in Nursing, BS in Nursing, MS in Nursing, Indiana University; RN

Leach, Celinda K., Master Instructor, Program Chair in Practical Nursing, Bloomington

Diploma of Nursing, University of Tennessee; BS in Health, MPH, Indiana University; RN

Lessig, Alan, Senior Instructor in Office Administration, Bloomington

BS in Business Administration, University of Kentucky; MAT, University of Louisville

Melton, Nona L., Master Instructor in Practical Nursing, Bloomington

BS in Nursing, University of Evansville; RN

Nedel, John, Instructor, Program Chair in General Education, Bloomington

EMT Maplewood Vocational School; BS in Mathematics, Mount Union College; MA in Applied Mathematics, Indiana University

Nelson, Peg L., Master Instructor, Program Chair in Academic Skills Advancement, Bloomington

BS in Elementary Education, MS in Elementary Education, Indiana University

Nissen, Don E , Senior Instructor in Visual Communications, Columbus

BA in Mass Communications and English, Buena Vista College; MA in Education, University of Kansas

Nolting, Bonnie J., Senior Instructor in Office Administration, Columbus

BS in Business Education, MS in Business Education, Indiana University

Norrell, Mary Patricia, Master Instructor in Practical Nursing, Columbus

BS in Nursing, Ball State University, MS in Health Sciences Education, Indiana University; RN

Paige, Karen, Instructor in Nursing, Bloomington

ASN, BSN, MS in Education, Indiana University; RN

Paquette, Don, Instructor in Industrial Maintenance and Interim Program Chair in Electronics, Bloomington

BGS in General Studies, Indiana University; MBA in Business Administration, Indiana Wesleyan University; US Navy Electronic Technician Graduate

Pierce, Lori, Instructor in General Education, Bloomington

BS in Zoology, Brigham Young University; MS in Zoology, Eastern Illinois University

Pierro, Lou, Instructor, Program Chair in Computer Information Systems, Bloomington

BS in Physical Education, MA in Education, California State University; EdD in Higher Education Administration, Indiana University

Radcliffe, Jill, Master Instructor in Accounting, Bloomington

BA in Math, Western Illinois University; MEd in Math, University of Illinois; MBA, Indiana University; CPA

Reading, Thomas C., Instructor, Program Chair in Business Administration, Bloomington

BS in Business Administration, Harvard University; MBA, Indiana University

Rutherford, Jan L , Master Instructor, Program Chair in Office Administration, Bloomington

BS in Business Education, MS in Business Education, Indiana University

Ryser, Marilyn L., Instructor, Program Chair in Medical Assistant, Columbus

AAS in Nursing, AA in Liberal Arts, St. Louis College at Meramec; RN, CMA

Sheeler, Ian, Instructor in General Education, Bloomington

BS in Economics, MA in Rhetoric, MA in English, Ball State University

Strain, Larry L., Senior Instructor in Computer Information Systems, Bloomington

BS in Science Education, Indiana University

Taylor, June, Instructor in Practical Nursing, Columbus

BS in Nursing, Ohio State University; RN

Thompson, Pam, Senior Instructor in Practical Nursing, Bloomington

BS in Nursing, Morningside College; RN

Waltz, Susan, Instructor in Practical Nursing, Columbus

BS in Nursing, Indiana University; RN

Wang, Pei Wei, Senior Instructor, Program Chair in Industrial Technology, Columbus

BS in Mechanical Engineering, Shanghai Institute of Mechanical Engineering; MS in Industrial Engineering, University of Missouri

WHITLOCK, DEAN A., Instructor, Program Chair in Electronics Technology, Columbus

AAS in Biomedical Electronics Technology, BS in Electrical Engineering Technology, Purdue University

WILSON, JONATHAN, Master Instructor, Department Chair in Visual Communications, Columbus

BFA, San Francisco Art Institute; MFA in Photography, Indiana University

REGION 11

OFFICERS

SMITH, HOMER, Vice President/Chancellor

BS in Education, Western Kentucky University; MS in Education, Indiana University - Southeast

THOMAS, JONATHAN, Executive Dean, Madison

AAS in Technical Education, Rend Lake Junior College; BS in Education, MS in Education, Indiana State University

MOORE, L. JOE, Director of Instruction, Madison

AB in Economics, PhD in Economics, Indiana University

MCCLURE, BILL, Director of Instruction, Lawrenceburg

AB Social Studies/Secondary Education, Franklin College; MS in Administration/Supervision/Secondary Education, University of Cincinnati

FACULTY

ADAMS, CORA, Instructor in Practical Nursing, Madison

BS in Nursing, Indiana University

ALCORN, SHARON T., Instructor in General Education, Madison

BS in English/Secondary Education, Northwestern University; MS in Counseling, Indiana University

ALTHOFF, DOROTHEA, Instructor in General Education and Support Services, Madison

BS in Elementary Education, University of Nebraska-Lincoln; MS in Education, Indiana State University

BANTA, STEVEN D., Instructor in Electronics, Madison

AS in Electronics Technology, United Electronics Institute; BS in Computer Engineering Technology, National Education Center

BECKETT, ANN, Instructor in Nursing, Madison

BS in Nursing, Marian College

CHIRCH, JOHN R., Instructor in Business, Madison

BS in Business Administration, College of Mt. St. Joseph; MBA, Xavier University

DADOSKY, PAUL, Instructor in Computer Information Systems, Lawrenceburg

BS in Accounting, University of Kentucky; MS in Business Administration, Xavier University

DISCH, THERESA, Instructor in Medical Assisting, Madison

AS in Nursing, Vincennes University; LPN

ERICKSON, JOHN L., Program Chair in General Education and Support Services, Madison

BA in Music and Psychology, Indiana State University; MS in Anatomy, University of Kentucky

FITZPATRICK, STACEY, Instructor in in General Education and Support Services, Madison

BS in Merchandising/Marketing, BS in Education/English, Indiana University; MA in Secondary Education, Ball State University

GARNER, ANNABET, Program Chair in Medical Assistant, Madison

AS in Medical Assistant, Ivy Tech State College; CMA

GEGLEIN, RICHARD E., Program Chair in Business/Accounting, Madison

BA in Business Administration, Hanover College; MBA, Indiana Wesleyan University

GRAVER, MARK E., Instructor in Computer Information Systems, Madison

BS in Business Administration, Indiana University; MS in Administrative Management, Central Michigan University

GREER, RUTH A., Instructor in General Education, Madison

BA in Psychology, University of Florida; MS in Vocational Technical Education Teaching, Indiana State University

HARSIN, RAYMOND, Instructor in Business and Industry, Madison

AS in Computer Programming, AS in Information Data Management, Ivy Tech State College

HELMS, REBECCA, Instructor in Business/Accounting, Lawrenceburg

BA in Business Education, University of Evansville; MS in Business Education, Indiana State University

LAUBER, CYNTHIA, Instructor in Practical Nursing, Madison

BS in Nursing, Indiana Wesleyan University; RN

LYND, RUSSELL L., Program Chair in Welding, Madison

TC in Welding, Ivy Tech State College

MARPLE, DONNA, Program Chair in General Education and Support Services, Lawrenceburg

BA in Music, Marian College

PROFANT, SALLY, Instructor in Office Administration, Lawrenceburg

BS in Business Education, Miami University, Ohio

RAHE, PAT A., Instructor in General Education and Support Services, Madison

BS in Nursing, Indiana University; RN; MS in Nursing Ed., Ball State

SANCHEZ, ELIZABETH, Instructor in General Education and Support Services, Madison

BS in Nursing, DePauw University; MA in Management and Supervision in Health Care Administration, Central Michigan University; RN; CMA

SHAPINSKY, GENE ANN, Departmental Chair in Nursing, Madison

BS in Nursing, University of the State of New York; MS in Nursing, Bellarmine College

SHARP, KAREN, Instructor in General Education, Lawrenceburg

AA in English/History, Concordia Lutheran College; AAB in Business Management Technology, BS in Education/Special Education/Elementary Education, MEd in Diagnostic and Remedial Education, Miami University

STEPHENS, EMILY A., Program Chair in Computer Information Systems and Office Administration, Madison

BS in Business Education, California State University, Los Angeles. MS in Human Resource Development, Indiana State University

TACKETT, GEORGE, Program Chair in Electronics, Madison

AAS in Electronics Technology, Ivy Tech State College; BS in Chemical Engineering, Rose-Hulman Institute of Technology

WILLIS, CHARMANE G., Instructor in Practical Nursing, Madison

BS in Nursing, Ball State University; RN

YOWLER, HOLLACE, Instructor in Practical Nursing, Madison

BS in Nursing, University of Kentucky; RN

REGION 12

OFFICERS

SCHENK, DAN, Executive Dean

BS in Business Management, University of Southern Indiana; MBA, University of Evansville

Naas, James, Dean of Instruction

BS in Forestry, Southern Illinois University; MS in Occupational Education, Southern Illinois University; PhD in Vocational Education Studies, Southern Illinois University

FACULTY

Apka, Barbara H., Senior Instructor in Basic Skills, Evansville

BA in Mathematics, University of Evansville; MS in Education, University of Southern Indiana

Bailey, Patricia A., Program Chair, Senior Instructor in Medical Assistant, Evansville

Diploma of Nursing, St. Thomas School of Nursing; BS in Health Services, University of Southern Indiana; CMA

Bailey, Sandra C., Program Chair, Master Instructor in Business Administration, Evansville

BS in Business Administration, University of Southern Indiana; MBA, University of Evansville

Baker, Bobby L., Program Chair, Paramedic Science, Evansville

BS in Emergency Health Services, University of Maryland

Blohm, Wendell, E., Senior Instructor in Visual Communications, Evansville

Bunner, Lana L., Program Chair, Master Instructor in Office Administration, Evansville

BS in Business Education, MS in Education, University of Southern Indiana

Combs, Steven B., Instructor in Design Technology, Evansville

BS in Industrial Education, MS in Industrial Education, Murray State University; CIT

Coughlan, Danette, Instructor, Computer Information Systems, Evansville

BS in Computer Science, University of Southern Mississippi

Crawford, Sherry A., Program Chair, Senior Instructor in English, Evansville

BS in International Communications, University of Evansville; MA in Liberal Studies, University of Evansville

Dentino, Mary Jo, Division Chair, Master Instructor in Business, Evansville

BS in Business Education, MS in Education, University of Southern Indiana

Diemer, Jeanie, Instructor in Business Administration, Evansville

BS in Business Education, Eastern Illinois University; MBA, University of Southern Indiana

Dillman, Matthew A., Division Chair, Master Instructor in Technology, Evansville

BS in Biophysics, University of Southern Indiana; MS in Engineering Technology, Murray State University; MEng in Industrial Engineering, University of Louisville; PE, CQE, CMFGE, CSIT

Dossett, Reva F., Program Chair, Instructor in General Education, Evansville

BA in Sociology, Indiana University; MS in Counseling, University of Evansville

Duncan, Sharon A., Master Instructor in Practical Nursing, Evansville

BS in Nursing, Evansville College School of Nursing; MSAC in Counseling, Indiana State University; MS in Nursing, University of Evansville

Dye, Susan E., Senior Instructor in Nursing, Evansville

BS in Nursing, MS in Nursing, University of Evansville

Ehlen, Margaret K., Master Instructor in Basic Skills Advancement/Special Needs Coordinator, Evansville

BA in English, University of Illinois; MA in Learning Disabilities, Northeastern Illinois University

Gibson, Patricia G., Master Instructor in Practical Nursing, Evansville

BS in Nursing, University of Evansville; MS in Agency Counseling, Indiana State University

Gore, Karen W., Program Chair, Instructor in Business Administration, Evansville

BA in Business Education, MBA, University of Evansville

Greeson, Cynthia B., Program Chair, Instructor in Accounting, Evansville

BS in Biology, Central Michigan University; MBA, University of Southern Indiana; CPA

Heller, William C., Program Chair, Master Instructor in Computer Systems, Evansville

BA in Math, Defiance College; MS in Business Administration, St. Francis College

Hesson, Philip A., Instructor in Business, Tell City

BS in Business Management, Indiana University; MBA, University of Kentucky

Howard, Michael A , Program Chair, Senior Instructor in General Education, Evansville

BS in Engineering/Physics, Murray State University; MEP, University of Virginia

Jennings, Edwin H., Senior Instructor in Manufacturing Technology, Evansville

BS in Manufacturing Engineering Technology, Murray State University

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REGION 13

OFFICERS

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BS in Commerce, University of Louisville; MBA, University of Kentucky

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Wilder, Raymond J., Instructor in Welding

Electronics Certificate, RETS Institute

Accreditations and Memberships

Ivy Tech State College is accredited by the North Central Association of Colleges and Schools. Other accrediting agencies and affiliates are listed below by regions. The college is a member of the American Association of Collegiate Registrars and Admissions Officers, the American Association of Community Colleges, the Association of Community College Trustees, CAUSE, the National Association of College and University Business Officers, the National Association of Colleges and Employers, the National Association of Financial Aid Administrators, the National Council for Research and Planning, the National Council on Student Development, and the Society for College and University Planning.

Region 1 (Gary, East Chicago, Valparaiso)

Agency	Program Area
The American Culinary Federation Educational Institute	Hospitality Administration Culinary Arts
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Joint Review Committee for Respiratory Therapy Education	Respiratory Care
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
National League for Nursing Accrediting Commission	Practical Nursing (Valparaiso)
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing (Gary and Valparaiso)
Indiana State Board of Health	Nurse Aide
National Restaurant Association	Hospitality Administration
Commission on Accreditation in Physical Therapy Education	Physical Therapist Assistant

Region 2 (South Bend, Elkhart, Warsaw)

Agency	Program Area
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
National Accrediting Agency for Clinical Laboratory Services	Medical Laboratory Technician Phlebotomy
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Associate of Collegiate Business Schools and Programs	Business Administration Accounting Computer Information Systems Office Administration
Dietary Managers Association	Dietary Manager
National League for Nursing Accrediting Commission	Associate of Science in Nursing
Indiana State Emergency Management Agency	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/National Automotive Technicians Education Foundation	Automotive Technology
Recreational Vehicle Industry Association	Recreational Vehicle Service Technology

Region 3 (Fort Wayne)

Agency	Program Area
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Joint Review Committee for Respiratory Therapy Education	Respiratory Care
Indiana State Board of Nursing	Practical Nursing
Indiana State Board of Health	Nurse Aide Director of Activities/Extended Care Social Services/Long-Term Care
Dietary Managers Association	Dietary Manager
The American Culinary Federation Educational Institute	Hospitality Administration Culinary Arts
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
National Organization for Human Services Education	Human Services
Council for Standards in Human Service Education	Human Services
Association for Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
Business Professionals of America	Accounting Business Administration Computer Information Systems Office Administration
American Association for Paralegal Education	Paralegal
National Restaurant Association	Hospitality Administration
Commission for Hotel Restaurant Institutional Education	Hospitality Administration

Region 4 (Lafayette)

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Qualified Medication Aide Certified Nursing Assistant
National League for Nursing Accrediting Commission	Associate of Science in Nursing
American Dental Association, Commission on Dental Accreditation	Dental Assistant
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment Accrediting Review Committee on Education in Surgical Technology Joint Review Committee for Respiratory Therapy Education	 Medical Assistant Surgical Technology Respiratory Care
Dietary Managers' Association	Dietary Manager
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology

Region 5 (Kokomo, Logansport)

Agency	Program Area
Association for Collegiate Business Schools and Programs	Office Administration Computer Information Systems Business Administration Accounting
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
Indiana State Board of Health	Qualified Medication Aide Certified Nurse Assistant
Indiana State Board of Nursing	Practical Nursing
American Design Drafting Association	Design Technology
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology

Region 6 (Anderson, Marion, Muncie)

Agency	Program Area
Association for Collegiate Business Schools and Programs	Office Administration Computer Information Systems Business Administration Accounting
Association for Gerontology in Higher Education	Human Services
Indiana State Emergency Management Agency	Emergency Medical Technician Ambulance/Advance
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana State Board of Nursing	Practical Nursing
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
Commission on Accreditation in Physical Therapy Education	Physical Therapy Assistant

Region 7 (Terre Haute)

Agency	Program Area
Federal Aviation Administration	Aircraft Maintenance Technology
Indiana State Board of Health	Nurse Aide Social Services/Long-Term Care Activity Director/Long-Term Care Qualified Medication Aide
Indiana State Emergency Management Agency	Emergency Medical Technician
Indiana State Board of Nursing	Practical Nursing
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
National Accrediting Agency for Clinical Laboratory Sciences Joint Review Committee on Education in Radiologic Technology	Medical Laboratory Technician Radiologic Technology
National Association of Industrial Technology	Automotive Technology Manufacturing Technology Design Technology Electronics Technology Industrial Technology Quality Science
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration

Region 8 (Indianapolis)

Agency	Program Area
The American Culinary Federation Educational Institute	Hospitality Administration Culinary Arts
American Design Drafting Association	Design Technology
Greater Indianapolis Chapter of the American Culinary Federation, Incorporated	Hospitality Administration Culinary Arts
Restaurant and Hospitality Association of Indiana	Hospitality Administration
Collegiate Secretaries International (PSI)	Office Administration
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment Accreditation Review Committee on Education in Surgical Technology Joint Review Committee on Education in Radiologic Technology Joint Review Committee for Respiratory Therapy Education	 Medical Assistant Surgical Technology Radiologic Technology Respiratory Care
The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association	Occupational Therapy Assistant
Association of Collegiate Business Schools and Programs	Accounting Office Administration Computer Information Systems Business Administration
Council for Standards in Human Services Education	Human Services
National Association of Industrial Technology	Industrial Technology Manufacturing Technology Automotive Technology Design Technology Electronics Technology
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Certified Nurse Aide Qualified Medication Aide Nursing Home Activities Director Nursing Home Social Services Designee

Region 9 (Richmond)

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission	Associate of Science in Nursing
Indiana State Board of Health	Nurse Aide
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
Dietary Managers Association	Dietary Manager
Indiana State Emergency Management Agency	Emergency Medical Technician, Ambulance Advanced EMT
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
Association of Collegiate Business Schools and Programs	Accounting Office Administration Business Administration Computer Information Systems

Region 10 (Bloomington, Columbus)

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Association of Collegiate Business Schools and Programs	Accounting Business Administration Office Administration Computer Information Systems
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
Indiana State Board of Health	Qualified Medication Aide Certified Nursing Assistant Home Health Aide

Region 11 (Lawrenceburg, Madison)

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Commission on Accreditation of Allied Health Education Programs: American Association of Medical Assistants' Endowment	Medical Assistant
Indiana State Emergency Management Agency	Emergency Medical Technician, Basic and Advanced

Region 12 (Evansville)

Agency	Program Area
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Accreditation Review Committee on Education in Surgical Technology	Surgical Technology
Association of Collegiate Business Schools and Programs	Accounting Office Administration Business Administration Computer Information Systems
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
National Association of Industrial Technology	Electronics Technology Design Technology Manufacturing Technology
Joint Review Committee for Educational Programs for the EMT-Paramedics	Paramedic
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
National League for Nursing Accrediting Commission	Associate of Science in Nursing Practical Nursing

Region 13 (Sellersburg)

Agency	Program Area
Indiana State Board of Nursing	Associate of Science in Nursing Practical Nursing
Indiana State Board of Health	Nurse Aide Qualified Medication Aide
Indiana State Emergency Management Agency	Emergency Medical Technician, Ambulance
National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation	Automotive Technology
Commission on Accreditation of Allied Health Education Programs:	
American Association of Medical Assistants' Endowment	Medical Assistant
Association of Collegiate Business Schools and Programs	Accounting Business Administration Computer Information Systems Office Administration

Contact Information for Accrediting Organizations

The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association
4720 Montgomery Lane P.O. Box 31220
Bethesda, MD 20824-1220
(301) 652-2682

Accreditation Review Committee on Education in Surgical Technology
7108-C South Alton Way
Englewood, CO 80112
(303) 694-9262

American Association for Paralegal Education
P.O. Box 40244
Overland Park, KS 66204

American Association of Medical Assistants' Endowment
20 North Wacker Drive, Suite 1575
Chicago, IL 60606
(312) 899-1500

American Culinary Federation Educational Institute
10 San Bartola Drive
Saint Augustine, FL 32086
1-800-624-9458

American Dental Association, Commission on Dental Accreditation
211 East Chicago Avenue
Chicago IL
(312) 440-2915

American Design Drafting Association
P.O. Box 799
Rockville, MD 20848-0799
(301) 460-6875

Association of Collegiate Business Schools and Programs
7007 College Boulevard, Suite 420
Overland Park, KS 66211
(913) 339-9356

Association for Gerontology in Higher Education
1001 Connecticut Avenue N.W - Suite 410
Washington, DC 20036-5504
(202) 429-9277

Collegiate Secretaries International (PSI)
10502 NW Ambassador Drive
P.O. Box 20404
Kansas City, MO 64195-0404
(816) 891-6600

Business Professionals of America
5454 Cleveland Avenue
Columbus, OH 43231

Commission for Hotel Restaurant Institutional Education (CHRIE)
1200 17th Street NW
Washington, DC 20363

Commission on Accreditation in Physical Therapy Education
1111 N. Fairfax Street
Alexandria, VA 22314
(703) 706-3245

Commission on Accreditation of Allied Health Education Programs
35 East Wacker Drive, Suite 1970
Chicago, IL 60601-2208
(312) 535-9355

Council for Standards in Human Services Education
Attn: Naydean Blair
Houston Community College System
5514 Claire Road
Houston, TX 77041
(713) 718-5539

Dietary Managers Association
One Pierce Place, Suite 1220 N
Itasca, IL 60143-3111
(708) 775-9250

Federal Aviation Administration
Airman Certification Branch
P.O. Box 25082
Oklahoma City, OK 73125-4940

Greater Indianapolis Chapter of the
American Culinary Federation, Inc.
1800 E. King Street
Franklin, IN 46131
(317) 736-7284

Indiana State Board of Health
1330 West Michigan Street
P.O. Box 1964
Indianapolis, IN 46206-1964
(317) 633-0100

Indiana State Board of Nursing
Health Professions Bureau
402 West Washington Street, Room 041
Indianapolis, IN 46204
(317) 232-2960

Indiana State Emergency Management Agency
302 West Washington Street, Room E-208
Indianapolis, IN 46204
(317) 233-6545

Joint Review Committee for Respiratory Therapy Education
1701 West Euless Boulevard, Suite 300
Euless, TX 76040-6823
(817) 283-2835

Joint Review Committee for Educational Programs for the EMT-Paramedic
7108-C South Alton Way, Suite 150
Englewood, CO 80112
(303) 694-6191

Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive, Suite 900
Chicago, IL 60606-2901
(312) 704-5300

National Accrediting Agency for Clinical Laboratory Sciences
8410 West Bryn Mawr Avenue, Suite 670
Chicago, IL 60631
(312) 714-8880

National Association of Industrial Technology
3300 Washtenaw Avenue, Suite 220
Ann Arbor, MI 48104-4200
(313) 677-0720

National League for Nursing Accrediting Commission
350 Hudson Street
New York, NY 10014
(212) 645-9685

National Institute for Automotive Service Excellence/National Automotive Technicians' Education Foundation
13505 Dulles Technology Drive
Herndon, VA 22071-3415
(703) 713-0100

National Organization for Human Services Education
Dr. Marianne R. Woodside
University of Tennessee, Knoxville
533 Andy Holt Tower
Knoxville, TN 37996-0150

National Restaurant Association
250 S. Wacker Drive, Suite 1400
Chicago, IL 60606

North Central Association of Colleges and Schools
30 North La Salle Street
Chicago, IL 606012-2504
(312) 263-0456

Recreational Vehicle Industry Association
PO Box 2999
Reston, VA 20195-0999
(703) 620-6003

Restaurant and Hospitality Association of Indiana
115 W. Washington Street, Suite 1165-S
Indianapolis, IN 46204
(317) 673-4211

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